Aalto University
School of Science
Master's Programme in Information Networks

Tiina Rahja

Facilitating organizational learning and knowledge flows

Master's Thesis

Espoo, February 8, 2019

Supervisor: Professor Eila Järvenpää

Instructors: Terhi Teiskonlahti, M.Sc. (Tech.), Eerikki Mäki, D.Sc. (Tech.)

Aalto University
School of Science

ABSTRACT OF THE MASTER'S THESIS

Author Tiina Rahja

Title of thesis Facilitating organizational learning and knowledge flows

Master programme Information Networks **Code** SCI3047

Thesis supervisor Prof. Eila Järvenpää

Thesis advisor(s) Terhi Teiskonlahti, M.Sc. (Tech.), Eerikki Mäki, D.Sc. (Tech.)

Date 08.02.2019 **Number of pages** 86+9 **Language** English

Abstract

Two separate trends illustrate the new characteristics of many current organizations. Firstly, organizations today depend more and more on knowledge in most of their operations, and knowledge work can be said to be the new standard of the working life. Secondly, geographical dispersion and virtual collaboration often characterize the daily reality of these knowledge-intensive organizations. Knowledge flows and organizational learning encounter new challenges in these new settings. This thesis studies how organizational culture, organizational structure and organizational work practices can facilitate knowledge flows and organizational learning within global, knowledge-intensive organizations.

The empirical research of the thesis was a single case qualitative study within a global, knowledge-intensive organization including secondary data, observation and 15 thematic interviews. Additionally, an extensive literature review from the field of knowledge management presents the theoretical frameworks of the thesis.

The findings suggest that in global, knowledge-intensive organizations the organizational structure should have two dimensions: a flat, hierarchical structure on one hand, and a vast network of communities on the other. Organizational culture should be psychologically safe, have high levels of trust, and be oriented towards openness, collaboration, learning and empathy. In global settings, additionally, the need for boundary-spanning culture is emphasized: organizational culture should encourage and value activities that increase cross-border collaboration. Furthermore, the findings suggest that in global settings organizations need institutionalized and personalized work practices to ensure smooth knowledge flows and organizational learning: when employees lack the advantages of copresence, there needs to be intentional practices pushing them to collaborate and share knowledge.

This thesis contributes to the field of knowledge management by increasing understanding of the factors affecting intraorganizational knowledge flows. Furthermore, the thesis proposes a synthesizing framework combining four eminent models from the fields of knowledge management and organizational learning. On the practical side, the thesis provides two practical tools that can be used in organizations to evaluate the current practices for knowledge sharing and organizational learning: the knowledge flow circle and the organizational learning circle.

Keywords Knowledge; knowledge management; knowledge flows; organizational learning; organizational culture; organizational work practices; organizational structure

Aalto-yliopisto
Perustieteiden
korkeakoulu

DIPLOMITYÖN TIIVISTELMÄ
(ABSTRACT IN FINNISH)

Tekijä Tiina Rahja

Työn nimi Organisaation oppimisen ja tietovirtojen tukeminen

Maisteriohjelma Information Networks **Koodi** SCI3047

Työn valvoja Prof. Eila Järvenpää

Työn ohjaaja(t) Terhi Teiskonlahti, DI, Eerikki Mäki, TkT

Päivämäärä 08.02.2019 **Sivumäärä** 86+9 **Kieli** Englanti

Tiivistelmä

Kaksi erillistä trendiä kuvastaa nykypäivän organisaatioiden uusia piirteitä. Organisaatiot ovat enenevissä määrin riippuvaisia tiedosta suuressa osassa toimintaansa, ja tietotyön voi sanoa olevan työelämän uusi standardi. Lisäksi maantieteellinen levittäytyminen ja virtuaalinen yhteistyö kuvastavat usein näiden tietointensiivisten organisaatioiden päivittäistä todellisuutta. Tietovirrat ja organisaation oppiminen kohtaavat uusia haasteita tässä uudessa todellisuudessa. Tämä diplomityö tutkii sitä, kuinka organisaatiokulttuuri, organisaatiorakenne ja organisaatiokäytänteet voivat tukea tietovirtoja ja organisaation oppimista globaalissa tietointensiivisessä organisaatiossa.

Työn empiirinen osuus on laadullinen ja muodostuu tapaustutkimuksesta globaalissa, tietointensiivisessä organisaatiossa. Aineisto koostuu tutkimusta tukevasta sekundaariaineistosta, havainnoinnista sekä 15:stä temaattisesta haastattelusta. Lisäksi kattava kirjallisuuskatsaus tietojohtamisen alalta esittelee tutkimuksen teoreettiset viitekehykset.

Tutkimuksen tulokset osoittavat, että globaalin tietointensiivisen organisaation organisaatiorakenteessa tulisi olla kaksi eri tasoa: matala hierarkkinen taso sekä laaja yhteisöjen verkosto. Organisaatiokulttuurin tulisi olla psykologisesti turvallinen, tukea luottamuksen kehittymistä ja kasvua, sekä suuntautua avoimuuteen, yhteistyöhön, oppimiseen ja empatiaan. Globaalissa kontekstissa tarve rajoja ylittävään kulttuuriin nousee kuitenkin selvästi esiin: organisaatiokulttuurin tulisi rohkaista ja arvostaa toimintaa, joka edistää yhteistyötä eri maantieteellisten sijaintien välillä. Lisäksi tutkimuksen tulokset osoittavat, että globaalissa kontekstissa organisaatiot tarvitsevat institutionalisoituja ja personalisoituja käytänteitä tukeakseen tiedon vapaata virtaamista sekä organisaation oppimista: kun työntekijät eivät ole fyysisesti lähellä toisiaan, täytyy organisaatiossa olla suunniteltuja toimintatapoja, jotka saavat työntekijät tekemään yhteistyötä ja jakamaan tietoa.

Tämä diplomityö lisää ymmärrystä niistä tekijöistä, jotka vaikuttavat organisaation sisäisiin tietovirtoihin, ja kontribuoi näin tietojohtamisen tutkimuskenttään. Työ myös ehdottaa viitekehystä, joka yhdistää neljä merkittävää mallia tietojohtamisen ja organisaation oppimisen tutkimuskentistä. Lisäksi työ tarjoaa kaksi käytännöllistä työkalua, joilla organisaatiot voivat arvioida tiedon jakamisen ja organisaation oppimisen käytäntöjään: tiedonkulun kehän sekä organisatorisen oppimisen kehän.

Avainsanat Tieto; tietojohtaminen; tietovirrat; organisaation oppiminen; organisaatiokulttuuri; organisaatiokäytänteet; organisaatiorakenne

FOREWORD

I worked on this thesis for around ten months, during which I several times described to interested friends and acquaintances the topic of my study. Most of them, when I described I was studying how does knowledge flow between different organizational locations, functions and people, reacted by right away noting 'But it doesn't!' Nevertheless, I hope that this thesis could help in finding ways to facilitate these flows and overall organizational learning.

Working on this thesis has been the best part of my studies at Aalto University. Despite a few desperate moments, I've loved every step of the process. I've learned more than I could have imagined, both from the subject of knowledge management, the methodologies and practices of scientific enquiry, and myself.

I want to express my deepest gratitude for everyone who made this journey possible for me. My advisors and supervisors from Aalto University and Fida International, Eila Järvenpää, Eerikki Mäki and Terhi Teiskonlahti, were always ready to help, listen and guide me, and the value and joy of the dialogues I had the pleasure to have with you cannot be emphasized enough. Furthermore, I feel privileged to have had the possibility to interview so many incredible employees of Fida: the commitment and care with which you are working towards providing better possibilities for the most vulnerable made a huge impression on me. Thank you for giving me your time, insights and ideas for this thesis, as well as for the inspiration you gave me for making my own future choices.

A full thesis cannot be written in isolation from other domains of life, and I could not have succeeded in integrating these different parts without the flexibility, encouragement and love of my family: thank you Kimmo, Valo and Taito for being the light and joy of my life, and for having given me every day more important things to concentrate on than this thesis.

In Espoo, 8.2.2019,

Tiina Rahja

TABLE OF CONTENTS

TABLE OF FIGURES

TABLE OF TABLES

1 INTRODUCTION

Organizations today depend more and more on knowledge in most of their operations, and knowledge work can be said to be the new standard of the working life. Cognitive and social skills are predicted to be the key capabilities of employees in the future, and a growing number of employees work in knowledge-intensive organizations (WEF 2016, EIU 2015, Davies et al., 2012, Newell et al., 2002). The concept of a *knowledge-intensive organization* is "a vague but meaningful category" (Alvesson, 2001), referring to organizations where – at least – the main input and output of the work is knowledge, work tasks require complex analytical skills, and the employees are usually highly educated (Mäki, 2008; Robertson & Swan, 2003; Alvesson, 2001; Starbuck, 1992).

When knowledge becomes the key resource of organizations, its management also requires careful consideration; hence the field of *knowledge management* has gained high interest since the early 1990' (Newell, 2016; Serenko, 2013). The traditional management styles have focused on the managers and their control and power over the organization's resources, but it seems knowledge cannot be managed the same way as the tangible resources such as property or stock: knowledge is too fluid a substance and too dependent on the people carrying it to be managed by the traditional, hierarchical way (Newell, 2016; Mäki, 2008; Bjørkeng et al., 2004; Robertson & Swan, 2003; Alvesson, 2001; Alvesson & Kärreman, 2001). This is one of the reasons why flatter, flexible forms of organizations are abounding in the current era (Bernstein et al., 2016; Hamel, 2011; Drucker, 1988). "In simple terms, management rests on the idea that work can be divided between those who work and those who plan, organize, co-ordinate and control work" (Alvesson & Kärreman, 2001, pp. 1000-1001), but when the actual work becomes too complex to be planned and organized by others than those conducting it, also its coordination and control need to be spread out to the knowledge workers themselves. Thus knowledge, instead of being *managed*, needs to be *facilitated*: knowledge and its users need to be actively supported, nurtured, encouraged and empowered, instead of being managed and controlled.

> This thesis studies **knowledge management** in **knowledge-intensive** organizations, even though it takes the approach that knowledge cannot be strictly managed, but it needs to be carefully **facilitated**, nurtured and allowed to flow freely within and between organizations.

What knowledge actually is, is a question that has been studied, discussed and debated enormously throughout the history, without reaching an unequivocal definition (Newell et al., 2002; Lam, 2000; Cook & Brown, 1999; Grant, 1996; Blackler, 1995; Collins, 1993; Nonaka 1994; Polanyi, 1966). There seems to be two main lines of thought: one seeing knowledge as *stuff*, or a *product* to be owned, the other considering it to be *love*, or a *process* to be taken part into (Massingham, 2014; Andriessen, 2008; Nicolini et al., 2003; von Krogh, 1998). These different conceptions of knowledge lead also to different choices and practices when trying to deal with knowledge – the other concentrates more on management and control, the other on facilitation and empowerment.

Knowledge is often conceptualized being either *tacit* or *explicit* and *individual* or *collective* (Boh, 2007; Alavi & Leidner, 2001; Lam, 2000; Nonaka, 1994; Polanyi 1966). Explicit knowledge is clear, codified, and unequivocal knowledge about and of things, approaching mere information, and it might easily be managed, stored and transferred without challenges, whereas tacit knowledge is subtle, often beyond words and possibly impossible to be shared in any other way than in face-to-face dialogues (Boh, 2007; Alavi & Leidner, 2001;

Haldin-Herrgard, 2000; Lam, 2000; von Krogh, 1998; Nonaka, 1994; Polanyi, 1966). Individual knowledge then resides *within* the minds and bodies of individuals, whereas collective knowledge is situated in *between* individuals and groups and owned by communities, not single individuals (Boh 2007; Lam, 2000; Nonaka, 1994; McDermott, 1999).

> This thesis takes on **knowledge** a very broad approach, concentrating on studying knowledge flows regardless of the type of knowledge running through them. Nevertheless, it seems probable that different knowledge types might end up running through different channels.

In addition to the recognition of knowledge as the key resource of organizations, the *geographical dispersion* of organizations and the need for *virtual collaboration* resulting from it are a rising trend in today's world (Nordbäck, 2018; Neeley, 2015; Ferrazzi, 2014). It is not uncommon anymore that co-workers seldom or hardly ever meet each other face-to-face, but mainly communicate via electronic media. This lack of co-presence changes the daily reality of organizations and can lead to considerable rearrangements in every aspect of organizational life (Nordbäck, 2018; Govindarajan & Gupta, 2001; Olson & Olson, 2000; Nohria & Eccles, 1992). Especially the need to ensure knowledge flows smoothly between different locations is challenging: how can individuals, groups and departments located even thousands of kilometers from each other be connected on a level that truly generates value and enables the whole organization to learn?

> This thesis studies knowledge flows between **different locations** of knowledge-intensive, **global** organizations and aims to find factors facilitating these flows.

Knowledge *flow* is a term closely connected to knowledge *sharing* and knowledge *transfer*. These terms are used in the literature in a quite synonymous manner (Tangaraja et al., 2016). This thesis, too, perceives them as discussing the same phenomenon but from slightly different viewpoints: knowledge sharing from the perspective of the *individuals* sharing it, knowledge transfer from the perspective of *technologies and tools* through which the knowledge runs, and knowledge flows from the perspective of the *knowledge* itself. Furthermore, the same subject of knowledge moving within and through organizations is also discussed under the term *organizational learning*. Even though knowledge needs to be acquired, stored, shared and created, in the end, it is only valuable when it is *used* and *applied*. The actual aim of knowledge sharing is not the movement of knowledge as such, but its *usage* in where it is moved to. Thus, the objective of smooth knowledge flows is in fact *learning* within the organization.

> This thesis studies how smooth **knowledge flows** and **organizational learning** can be facilitated within a global, knowledge-intensive organization.

There are different knowledge *enablers* that attempt to facilitate the knowledge processes of acquisition, storing, sharing and creation. These include organizational culture, organizational structure, people at organizations, technologies used in them, and organizational work practices (Lee & Choi, 2003). This thesis explores especially three of them: organizational culture, organizational structure and organizational work practices. *Organizational culture* refers to the intangible *spirit* of an organization, and it can be observed on three levels: manifestations, values, and basic assumptions (Schein, 1990). *Organizational structure* includes both formal and informal aspects and refers to how people are networked within organizations and how roles, responsibilities and tasks are distributed between them (Zheng et al., 2010; Lam, 2000; Minzberg, 1980).

Organizational work practices refer to an individual's or an organization's routine use of knowledge and standard ways of working, both formal and informal (Szulanski, 1996).

> This thesis studies especially what kind of **organizational culture**, **organizational structure** and **organizational work practices** facilitate knowledge flows and organizational learning between different locations of a knowledge-intensive, global organization.

1.1 THE PURPOSE OF THE THESIS AND THE RESEARCH QUESTIONS

The overall objective of this thesis is to contribute to the understanding of how does knowledge flow between different locations of a global knowledge-intensive organization. To narrow down this broad target especially organizational structure, organizational culture and organizational work practices as knowledge enablers are studied, to find out how can they facilitate the flowing of knowledge within an organization. Furthermore, as the movement of knowledge within an organization closely relates to the learning of that organization, as described above, the same aspects are also studied from the viewpoint of organizational learning. To summarize, the research problem of this thesis is:

> **How can organizational culture, organizational structure and organizational work practices facilitate knowledge flows and organizational learning within a global, knowledge-intensive organization?**

This overall research problem is, however, divided into three research questions, for the three different knowledge enablers to be discussed separately. Thus, the three research questions to be studied are:

> *RQ1: What kind of an organizational culture facilitates knowledge flows and organizational learning within a global, knowledge-intensive organization?*
>
> *RQ2: What kind of an organizational structure facilitates knowledge flows and organizational learning within a global, knowledge-intensive organization?*
>
> *RQ3: What kind of organizational work practices facilitate knowledge flows and organizational learning within a global, knowledge-intensive organization?*

On the theoretical side, this thesis aims to contribute in two aspects. Firstly, there is already a huge amount of literature studying knowledge sharing, knowledge transfer and knowledge flows also within global settings. Organizational culture and structure as facilitators of these flows are, as well, studied extensively. Organizational work practices, however, are not yet considered as knowledge enablers, and I propose that the findings from this thesis can serve as a first conceptualization of how organizational work practices can facilitate knowledge flows between different locations of a global, knowledge-intensive organization. Secondly, knowledge management (KM) and organizational learning (OL) are two separate, even though closely interrelated study fields. According to Castaneda et al. (2018), KM has already absorbed OL, and these fields are merged together. However, they still have their distinctive histories and traditional frameworks and vocabularies. This thesis proposes a framework that aims at connecting some of the most eminent models from both of these fields and thus facilitate the building of common language and shared understanding within the mutual study field.

On the practical side this thesis has two objectives as well. In a narrow scope, I aim for the findings of the thesis to help the case organization to develop their knowledge management practices and find ways to facilitate knowledge flows between different locations as well as overall organizational learning. In a broader scope, I aspire the findings to be generalizable enough for other global, knowledge-intensive organizations to be able to benefit from them as well.

1.2 THE STRUCTURE OF THE THESIS

This thesis is structured as follows: in the next chapter I will introduce relevant literature providing the background on knowledge itself, knowledge management, knowledge flows, knowledge enablers and organizational learning. Furthermore, in the same chapter I will propose a tentative framework connecting some of the eminent models from the fields of knowledge management and organizational learning. In the third chapter I present the case organization studied in the thesis as well as the used methodology and data analysis, whereas the fourth chapter presents the results of the empirical study. The fifth chapter discusses the findings and assesses the validity and limitations of this thesis, its theoretical and practical implications as well as some suggestions for future research.

2 LITERATURE REVIEW

In this chapter I introduce the theoretical concepts and frameworks used in this thesis. In the broad area of organizational studies, this thesis situates itself in the field of *knowledge management*, and the literature introduced in this chapter is mainly from this field. The chapter is structured as follows. First, the term knowledge itself is elaborated on and the field of knowledge management introduced. Then, theoretical concepts explaining and describing how knowledge is dealt with within organizations are presented; knowledge enablers – especially organizational culture and organizational structure – knowledge flows and organizational learning getting the most attention. Finally, the findings of the literature review are summarized in the last sub-chapter.

2.1 KNOWLEDGE AND ITS MANAGEMENT

This first sub-chapter introduces the broad theoretical context of the thesis. The concepts of knowledge, knowledge management, knowledge strategies and knowledge processes are shortly described, to familiarize the reader with the broader context of the subject.

2.1.1 WHAT IS KNOWLEDGE?

According to Newell et al (2002, p. 3), it is "evident from the literature that 'knowledge' is an intrinsically ambiguous and equivocal term." It is often discussed in comparison with data, information, expertise and wisdom (Nonaka & Peltokorpi, 2006; Bhatt, 2001; Bender & Fish, 2000; Bierly et al., 2000). The often-taken approach organizes these according to their complexity, and e.g. Bhatt (2001) suggests data to be raw facts, information an organized set of data, and knowledge meaningful information interpreted in the context in question. Bender & Fish (2000, p. 126), furthermore, add on top of these expertise as being "specialised, deep knowledge and understanding in a certain field, which is far above average", whereas Bierly et al. (2000, p. 598) set wisdom as the highest level, defining it as the ability "to use knowledge to establish and achieve goals". This thesis takes the approach that data is a subset of information, whereas information is a subset of knowledge; information and data are necessary but insufficient parts of knowledge, and knowledge includes the contextual aspects and knowing the ways of using it wisely. Thus, in this thesis knowledge is seen as a broad concept comprising of, inter alia, data and information, and including wisdom and expertise. All these terms are seen as describing the same phenomenon, but at different depth.

Cook & Brown (1999) nevertheless, in their seminal article *Bridging epistemologies: The generative dance between organizational knowledge and organizational knowing*, emphasize the essentiality of action and practice as a part *knowing*, not merely *possessing* knowledge. Growing from this understanding, *practice-based view* on knowledge and its management argues that it should rather be talked about *managing knowledge work*, instead of trying to manage knowledge itself, as knowledge is always more of a process than a product (Newell, 2016; Nicolini et al., 2003; Orlikowski, 2002). Nicolini et al. (2003, p. 6) conclude, "The conceptualization of knowledge as an object instead of a process – that is, as a mental substance mainly located in individual minds and manifested in written texts, representations, and routinized behaviors – is needlessly and, in our view, erroneously restrictive."

Despite the difficulties of defining what knowledge actually is, for the practical purposes of theory and action, it is often organized into two dimensions: epistemological, i.e. tacit-explicit, and ontological, i.e. individual-collective (Boh, 2007; Alavi & Leidner, 2001; Lam, 2000; Nonaka 1994, Polanyi, 1966). Explicit knowledge

can be equaled with mere information; it is exact, descriptive knowledge *about* and *of* things, and it is easy or at least possible to be articulated in words (Alavi & Leidner, 2001; Lam, 2000; Nonaka, 1994, Polanyi, 1966). Tacit knowledge on the other hand is subtle, context-dependent and procedural knowledge about *how* to do things, and it is often called know-how (Joia & Lemos, 2010; Boh, 2007; Alavi & Leidner, 2001; Lam, 2000; Haldin-Herrgard, 2000; Nonaka, 1994). In the ontological dimension, knowledge is either part of an individual or a collective: an individual's explicit knowledge and tacit know-how or a collective's shared understandings, norms, history, processes and culture. Lam (2000, p. 491) states that "Collective knowledge exists between rather than within the individuals." Lam (2000) further modifies the work of Blackler (1995) and Collins (1993) and names these four types of knowledge *embrained*, *embodied*, *encoded* and *embedded*. Blackler (1995) nevertheless also states that there is a fifth type of knowledge called *encultured* knowledge, which is close to but not entirely identical to embedded knowledge. These different knowledge types are introduced next.

Embrained knowledge is "formal, abstract or theoretical" (Lam, 2000, p. 492); it is dependent on individuals and their capabilities, and it can be explicated and explained in words. According to Lam (2000), this type of knowledge "enjoys a privileged status within Western culture", and scientific knowledge, too, belongs to this category. *Embodied* knowledge is also dependent on an individual, but its focus is on doing rather than knowing; its "generation cannot be separated from application" (Lam, 2000, p. 492) and it is highly contextual and largely beyond words (Lam, 2000; Blackler, 1995). The collective and explicit knowledge stored in manuals, books, rules and procedures is *encoded* by nature (Lam, 2000; Blackler, 1995). When individuals' experience and knowledge are abstracted and simplified into an encoded form, they are easier to be shared and stored, but at the same time some of the contextual and tacit aspects of them are lost (Lam, 2000). Lam (2000) includes in *embedded* knowledge the organizational routines, norms and shared understandings. It is specific not only to the contexts, but also to the relations between the people holding it, and it is highly dispersed by nature (Lam, 2000). Blackler (1995), however, separates between embedded and encultured knowledge: in his framework embedded knowledge only includes systemic, organizational routines, whereas *encultured* knowledge refers to socially constructed, emerging shared understandings. Thus Blackler (1995) even more differentiates between the knowledge *artefacts*, i.e. the shared routines, and the deeper *norms* underlying them, i.e. the shared understandings that often are not explicitly stated or even being consciously aware of.

As discussed above, there are nevertheless aspects of knowledge that do not fit into the above-described categorization (Newell, 2016; Huysman & de Wit, 2004; Nicolini et al, 2003; Orlikowski, 2002; Brown & Duguid, 2001; Cook & Brown, 1999). Some authors argue that "any discussion of knowledge is meaningless in the absence of a 'knower'" and that even though "knowledge can be represented in and often embedded in organizational processes, routines, and networks, and sometimes in document repositories, it cannot truly originate outside the heads of individuals" (Fahey & Prusak, 1998, p. 267). This view, thus, understates the value of embedded and encoded knowledge, and regards them as merely supplements to the true knowledge residing in the individuals. Another view stresses the significance of *situated* or *contextual* knowledge: "Situated knowledge is knowledge that is not embedded in somewhere – neither in manuals nor in the heads of individuals. Instead, individuals interacting with each other create situated knowledge in practice." (Huysman & de Wit, 2004, p. 86) This view emphasizes the fact that a part of knowledge is *sticky* (Szulanski, 1996) by nature: it only exists in the situation at hand, and cannot be stored, shared, embedded or utilized in other situations as such, but only *interpreted* and *made sense of* in order to be applied into the future situations.

McDermott (1999, p. 106) highlights these aspects of knowledge by stating that "[k]nowledge is the residue of thinking", and that "[k]nowledge is always *recreated* in the present moment" (emphasis in the original text). Furthermore, McElroy et al. (2006) point out that also social capital, forming of e.g. trust, beliefs, norms and rules, can be seen as being embodied and embedded of knowledge.

This thesis takes a very broad approach to knowledge, including into the concept both very tacit aspects, such as beliefs and feelings, as well as extremely explicit aspects, such as written instructions and orders. Nevertheless, to enable discussion about knowledge on a more detailed level, Lam's (2000) conceptualization of the four knowledge types – *embodied, embrained, encoded and embedded* – is applied. Furthermore, *knowing* is seen as that part of knowledge that resides within and beyond all other types of knowledge, enabling the usage of them. This *anatomy of knowledge* is summarized below in Figure 1. To emphasize the unity of knowledge despite the different categorizations, the inner lines of the circle are dashed.

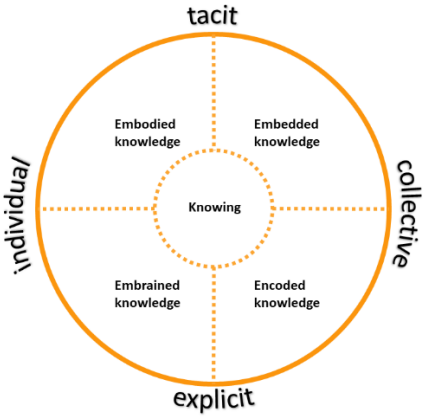

Figure 1. The anatomy of knowledge (applied from Lam (2000) and Cook & Brown (1999))

2.1.2 THE FIELD OF KNOWLEDGE MANAGEMENT

Knowledge management (KM) is a highly interdisciplinary study field still looking for its authorization as a credible scientific discipline (Castaneda et al., 2018; Serenko, 2013; Serenko & Bontis, 2013; Hazlett et al., 2005; Lee & Choi, 2003). As a field of study KM started among the practitioners and as an extension to (management) information systems (MIS/IS) discipline (Alavi & Leidner, 2001), which is a strongly technological approach and research field. From mid-1990's the stream started to shift towards more general managerial and practical approaches (Serenko, 2013; Serenko & Bontis, 2013; Raub & Rüling, 2001), and by now KM is developing towards being a mature academic discipline within the managerial field (Serenko, 2013; Serenko & Bontis, 2013). The often-mentioned disciplines contributing to the KM field are at least the related fields of management information systems (MIS), information systems (IS) and information technology (IT); organizational learning; strategic management; human resources management (HRM); intellectual capital; organization theory; and organizational behaviour (Castaneda et al., 2018; Serenko, 2013; Serenko & Bontis, 2013; Foss et al., 2009; Nonaka & Peltokorpi, 2006; Hazlett et al., 2005; Newell et al., 2002; Alavi & Leidner, 2001; Alvesson & Kärreman, 2001; Raub & Rüling, 2001; Soliman & Spooner, 2000; Nahapiet & Ghoshal, 1998). As Alvesson & Kärreman (2001, p. 996) state: "Knowledge management can be seen as an umbrella

term for a wide spectrum of academic orientations." The main fields from which KM arises are summarized in Figure 2 below.

Figure 2. The study fields close to knowledge management (KM)

Knowledge management as a scientific field originated from the practice, and many of the field's citation classics have been published in practice-oriented publications, such as *Harvard Business Review* and *California Management Review* (e.g. Wenger & Snyder, 2000; Hansen et al., 1999; McDermott, 1999; Zack, 1999; Brown & Duguid, 1998; Fahey & Prusak, 1998; Nonaka & Konno, 1998; O'Dell & Grayson, 1998; von Krogh, 1998). Followingly, and as the meandering history of KM implies, knowledge management is "an inherently complex and confusing concept" (De Long & Seemann, 2002, p. 43) with a multitude of definitions. It has been stated to be "a process of facilitating knowledge-related activities" (Bhatt, 2002, p. 32) or "organizational practices that facilitate and structure knowledge sharing among knowledge workers" (Huysman & de Wit, 2004, p. 81). Alavi & Leidner (2001, p. 113) refer to KM as "identifying and leveraging the collective knowledge in an organization", whereas McDermott (1999, p. 110) highlights that "*to leverage knowledge we need to focus on the community that owns it and the people who use it, not the knowledge itself*" (emphasis in the original text). These definitions reflect the different waves of knowledge management and can be seen as a trajectory of the KM field. In this thesis knowledge management is approached from a very broad viewpoint and it is seen to include all the different factors that facilitate the flourishing and free flowing of knowledge within organizations, "whether these are explicitly labelled as "KM" or not." (Swan et al., 1999, p. 264). Furthermore, as Grover & Davenport (2001, p. 5) note, "the best future for knowledge management would be for it to become so pervasive and common that it seems invisible."

The two main branches of study among KM are often referred to as stemming from either the IS/IT field or general managerial fields (Mäki, 2008; Hazlett et al., 2005; Alvesson & Kärreman, 2001), and these branches have been seen to be in juxtaposition (Raub & Rüling, 2001). Von Krogh (1998) names these two approaches as *cognitivist* and *constructionist* views, Swan et al. (1999) *cognitive network* and *community networking models*; Hansen et al. (1999) *codification* and *personalization strategies*; Choi & Lee (2002) *system* and *human* strategies; Hazlett et al. (2005) *computational* and *organic paradigms*; Ipe (2003) *technology-driven* and *people perspectives*; and Mäki (2008) *technological* and *human interaction-based approaches*. Furthermore, Massingham (2014, p. 1077) describes these two branches as *product-* and *process-centered views*: the product view sees knowledge as an independent object that can be located, stored, manipulated and transferred without a human actor, whereas the process view emphasizes the "ways to promote, motivate, encourage, nurture or

guide the process of knowing" without separating the knowledge from the knower. As the earlier discussion of the different aspects of knowledge itself reveals, these two approaches to knowledge management focus on the different ends of the explicit-tacit continuum: the technological, product-oriented approaches concentrate mainly on managing explicit knowledge or information, whereas the process-centered view concentrates on human interaction and facilitating the creation and sharing of tacit knowledge. Newell et al. (2002, p. 20) phrase this difference followingly: "Managing knowledge within the knowledge-based organization is, therefore, more about the management of the people employed in these firms, typically organized in teams, than about the development of information and communication technologies to extract and capture this knowledge." These different approaches and their labels from several authors are summarized in Table 1 below.

Table 1. Two approaches to knowledge and its management by different authors

Author(s)	Explicit	Tacit
von Krogh, 1998	cognitivist view	constructionist view
Hansen et al., 1999	codification	personalization
Swan et al., 1999	cognitive network model	community networking model
Choi & Lee, 2002	system strategy	human strategy
Ipe, 2003	technology-driven perspective	people perspective
Hazlett et al., 2005	computational paradigm	organic paradigm
Mäki, 2008	technological approach	human interaction-based approach
Massingham, 2014a	product-centered view	process-centered view

The gap between the allegedly separate approaches, however, seems not to be as wide as some authors have claimed it to be (Raub & Rüling, 2001). Davenport & Grover in their foreword for the special issue on knowledge management of *Journal of Management Information Systems* – a very IS-oriented journal – state already at 2001: "there seems to be clear recognition that knowledge is created and applied only in the minds of human beings. Technology can provide assistance in knowledge management, but its importance pales in comparison to developing knowledge-oriented cultures, motivating individuals to share and use knowledge, and encouraging workers to view their jobs in terms of effective knowledge management" (Davenport & Grover, 2001, p. 4).

The two approaches can also be seen as different *waves* or *generations* of knowledge management. The first wave concentrated on the IT systems and their abilities to increase the usefulness of knowledge stocks (Castaneda et al., 2018; Serenko, 2013; Huysman & de Wit, 2004; Swan et al., 1999), and knowledge was approached as an object "to be stored and manipulated" (Alavi & Leidner, 2001, p. 110): the emphasis was on explicit knowledge, both *embrained and encoded*. The second generation then again concentrated on the tacit nature of knowledge and its residing in the heads of individuals (Castaneda et al., 2018; Serenko, 2013; Huysman & de Wit, 2004; Fahey & Prusak, 1998), and the emphasis was on *embodied* knowledge. Furthermore, the third generation emphasized the collective nature of knowledge: "knowledge belongs to

communities", as McDermott (1999, p. 108) puts it. According to this view not even individual knowledge can be separated from the context in which it exists, and all the knowledge is only meaningful and relevant in the right context (McDermott, 1999; Swan et al., 1999). Thus, the third generation emphasized the importance of *embedded* knowledge. According to Serenko (2013), the fourth generation of KM, from around 2014 onwards, has its focus especially on the increasing *complexity* of the knowledge domain, and knowledge is seen as a *relationship*. It has been recognized that managing collective knowledge and learning is much more complicated and its outcomes harder to predict than when dealing with only individual-level knowledge (Huysman & De Wit, 2004, p. 88). The fourth generation, thus, tries to include all the different aspects of knowledge into its domain, and the emphasis is on the knowledge situated in *between* individuals. Serenko (2013, p. 777) further notes that "Each subsequent KM generation does not disregard or displace the previous one; instead, KM development is cumulative, and each new generation often builds upon the ideas introduced earlier."

This thesis belongs to the fourth generation and takes the viewpoint that all of these different approaches are important, and they should be combined, not contrasted, even though they might require different management and facilitation styles and tools. In today's world there is hardly any organization that would work without the help of ICT tools, and at the same time the need to collaborate, cooperate and network with other people is, if possible, even higher than ever before. Thus, the emphasis in this thesis is on knowledge *facilitation*, rather than on knowledge *management*.

2.1.3 KNOWLEDGE STRATEGIES

Knowledge strategy, in the context of this thesis, refers to an organization's strategy to exploit and explore knowledge it either already has or plans to acquire. The two main knowledge strategies are exploration and exploitation (Mäki, 2008; von Krogh et al., 2001; Zack, 1999; March, 1991), but these can be further bisected based on whether the knowledge in question is existing or new (Mäki, 2008; von Krogh et al., 2001). Mäki (2008, p. 44) builds on findings by Zack (1999) and von Krogh et al. (2001) and presents a framework for the four different strategies, depicted in Figure 3.

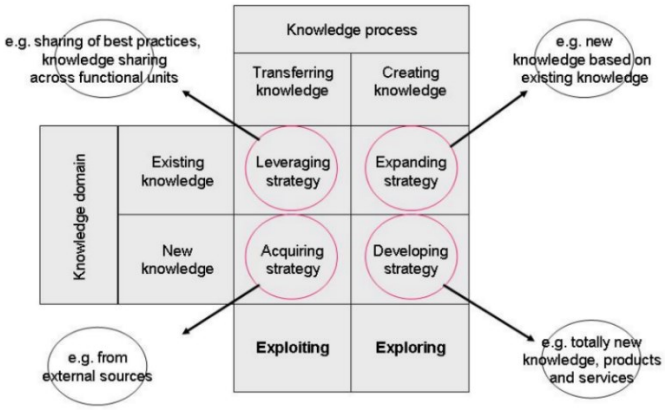

Figure 3. Knowledge strategies (Mäki, 2008)

According to Mäki (2008, p. 43), "Explorative strategy refers to the creation of new knowledge and exploitative strategy to the reuse and intraorganizational transfer of existing knowledge". The purpose of exploitation, according to Swan et al. (1999, p. 264), is "to reduce problems of 'reinventing the wheel' by

using existing knowledge more efficiently." March (1991, p. 85) notes that its returns are "positive, proximate, and predictable." The essence of exploration on the other hand, again by March (1991, p. 85), is "experimentation with new alternatives. Its returns are uncertain, distant, and often negative."

Both exploitation and exploration can be used with already existing knowledge and with new knowledge – either totally new, or new to the organization in question (Mäki, 2008; von Krogh et al., 2001). These two dimensions result into the four strategies described in Figure 3, namely *leveraging*, *acquiring*, *expanding* and *developing*, and these are shortly presented below.

The *leveraging* strategy, according to Mäki (2008, p. 44), aims at "operational efficiency by the sharing of best practices and knowledge across functional units." The *acquiring* strategy on the other hand aims to acquire knowledge existing outside of the organization and transfer it widely into the organization (Mäki, 2008; von Krogh et al., 2001). The *expanding* strategy aims at creating new knowledge from already existing knowledge, e.g. by combining knowledge from different sources (Mäki, 2008; von Krogh et al., 2001). Here the emphasis is "on increasing the scope and depth of knowledge by refining what is known and by bringing in additional expertise relevant for knowledge creation" (von Krogh et al., 2001, p. 430). Finally, the *developing* strategy attempts to build totally new knowledge – "as far as this is even possible", as Mäki (2008, p. 45) remarks – and it is often used e.g. in R&D departments and research settings.

An organization can utilize different strategies in different functions and units (Mäki, 2008; Zack, 1999), and according to Zack (1999, p. 137) the ideal is to find a suitable balance between exploitation and exploration: "Exploration without exploitation cannot be economically sustained over the long run unless it is subsidized or directly generates a revenue stream (e.g., a research institute). Exploitation without exploration will ultimately result in trying to pump from a dry well."

The emphasis in this thesis is especially on exploitation and the leveraging strategy: the study concentrates on how an organization can disseminate knowledge it already has to all parts of the organization where it might be needed.

2.1.4 KNOWLEDGE PROCESSES

A knowledge process is, in the context of this thesis, a set of actions that somehow alters the knowledge in question. Mäki (2008, p. 55) has identified knowledge acquisition, knowledge storing, knowledge transfer and sharing, and knowledge creation as the most commonly mentioned knowledge processes within the relevant literature, and these are shortly introduced below. As knowledge sharing is the main subject of this thesis, it is however discussed in detail below in chapter 2.2. Nevertheless, as Mäki (2008, p. 53) states: "It seems somewhat artificial to put different knowledge processes into sequential order because knowledge processes are highly interrelated, ill-structured, usually overlapping, and their beginnings and ends are difficult to define accurately." Furthermore, also Swan et al. (1999, p. 272), note that "knowledge (unlike information) cannot simply be processed; rather it must be continuously re-created and re-constituted through dynamic, interactive and social networking activity." Thus, knowledge processes are merely constructs built to help to analyze the overall flowing of knowledge, not so much truthful descriptions of how that happens in real life.

Knowledge acquisition

An organization can acquire new knowledge on individual, group and organizational levels. On the individual level this includes activities such as individual knowledge searching, training and personal networks. On the

organizational level acquisition methods include hiring new employees, mergers and acquisitions, and organizational development and training programs. The group level is situated in-between these two, and it might include activities such as inter-group meetings, lessons learned databases and informal communication among the different groups. (Mäki, 2008; Zollo & Winter, 2002; Prencipe & Tell, 2001)

Knowledge storing

Traditionally, in the Western countries, storing knowledge into databases has been taken as the main content of all knowledge management (Grover & Davenport, 2001). Nevertheless, it rarely is enough to store knowledge, if there are no clear and easy ways to *retrieve* and *use* the stored knowledge. Thus, in practice knowledge storing is only a minor part of the overall flowing of knowledge, though essential in the sense that without proper storing of knowledge its reuse and exploitation is impossible (Mäki, 2008).

Embodied and embrained knowledge can only be stored within individuals, whereas encoded knowledge is mainly stored in physical or digital databases. Furthermore, also embedded knowledge in the form of organizational structures, procedures and routines as well as social networks and relationships contain great amounts of stored knowledge (Mäki, 2008; Lam, 2000).

Storing knowledge can be approached both from the viewpoint of *saving* the acquired knowledge into e.g. a database, individual, routine or a process, and *retrieving* it from those. From the saving viewpoint the process needs to be easy and routinized enough for the employees truly to conduct it; often official databases end up being graveyards of outdated and unrelated information of which no-one is responsible of. From the viewpoint of retrieval, the searching of and accessibility to the knowledge in the storage must be made so simple and well-known in the organization that it actually is used, instead of e.g. just asking straight from a colleague – even though this asking can be considered as retrieving knowledge stored within individuals. This discussion relates strongly to the next knowledge process, namely knowledge transfer and sharing, which is discussed in more detail in chapter 2.2 below.

Knowledge creation

In addition to acquiring, storing and sharing existing knowledge, organizations also create new knowledge. The most known framework for conceptualizing knowledge creation is the SECI model created by Nonaka and colleagues (Nonaka & Toyama, 2003; Nonaka & Toyama, 2002; Nonaka et al., 2000; Nonaka & Konno, 1998; Nonaka 1994).

The SECI model consists of four modes of knowledge conversion described below in Figure 4. This conversion between tacit and explicit knowledge is seen as resulting into knowledge creation. *Socialization* means sharing one individual's tacit knowledge to another, so that they also learn it as tacit knowledge. E.g. apprenticeships and shadowing experienced employees aim to socializing the expert's knowledge into the skillset of the apprentice as well. *Externalization* includes "[a]rticulating tacit knowledge through dialogue and reflection" (Nonaka & Toyama, 2002, p. 996) and thus converting it into explicit knowledge. Often e.g. brainstorming sessions and workshops aim to externalization. Through *combination* different units of explicit knowledge are tied together, becoming totally new explicit knowledge. Typical examples include e.g. combining the knowledge of different organizational functions or areas together, to create new knowledge of the whole organization. Finally, through *internalization* explicit knowledge converts into an individual's tacit knowledge. Typically, on the individual level this means e.g. reading new knowledge from books and then applying it in

real life, thus converting embrained knowledge into embodied knowledge. (Nonaka & Toyama, 2003; Nonaka & Toyama, 2002; Nonaka et al., 2000; Nonaka & Konno, 1998; Nonaka 1994)

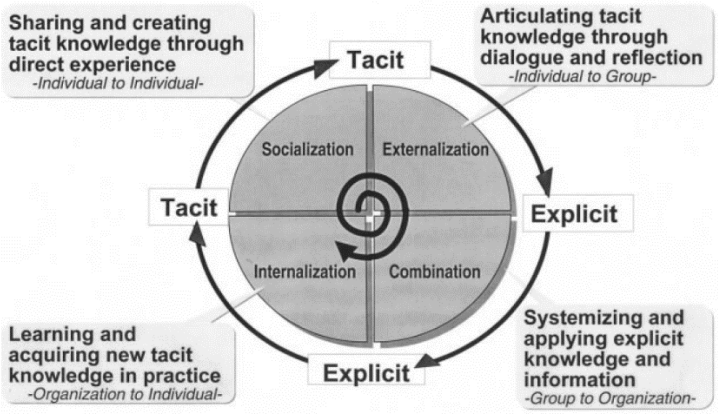

Figure 4. The SECI model by Nonaka and colleagues (Nonaka & Toyama, 2002)

Knowledge creation as a concept is close to the idea of learning: as individuals and organizations create new knowledge, they learn. According to Nonaka (1994), internalization is the process most closely related to the traditional concept of learning, whereas the other conversion modes have tended to be forgotten. "Taken by itself, learning has rather limited, static connotations whereas organizational knowledge creation is a more wide-ranging and dynamic concept", Nonaka (1994, p. 34) notes. These differences are further elaborated on in chapter 2.4 while discussing organizational learning.

2.2 KNOWLEDGE FLOWS

Knowledge sharing is one of the most researched subjects in the field of knowledge management (Mueller, 2014; Joia & Lemos, 2010; Mäki, 2008; Chen & Huan, 2007; Riege, 2005; Ipe, 2003; Bock & Kim, 2002; Goh, 2002; Bartol & Srivastava, 2001; Bhatt, 2001; Schulz, 2001; Bender & Fish, 2000; Gupta & Govindarajan, 2000a; Osterloh & Frey, 2000). The same phenomenon – the movement of knowledge within and between people, groups and organizations – has been studied with different terms: knowledge sharing, knowledge transfer and knowledge flows being the ones used the most. Even though there has been discussion about the subtle differences of the terms, generally speaking they describe the same knowledge process. Nevertheless, it seems that the connotations of the terms are slightly different. Knowledge transfer seems to originate from the IT branch of the KM field, and emphasize the technologies used to transfer codified knowledge, whereas knowledge sharing seems to stress the individuals and their significance in sharing knowledge with each other (Tangaraja et al., 2016).

The term knowledge flow, it seems, has not got such clear origins, and it is used in both branches in both a very strictly or very loosely defined manner: e.g. Schulz (2001, p. 662) defines knowledge flows as "the aggregate volume of know-how and information transmitted per unit of time", whereas Zhuge (2002, p. 24) describes it to be "a process of knowledge passing between people or knowledge processing mechanism." Mäki (2008, pp. 52, 53) equals knowledge flow to "sharing and transferring information and knowledge within an organization" but also breaks – with the conditions mentioned above – knowledge flows into the above-discussed processes of acquisition, storing, transfer and sharing, and creation. Thus, Mäki (2008) suggests that the sharing and transferring of knowledge in fact includes also acquiring, storing and creating it. This

perplexity of definitions highlights the obscurity of the term knowledge and its processing itself: acquiring knowledge naturally also means transferring it from one place to another, and when knowledge is stored, it is also transferred to the storage in question. Furthermore, when knowledge is created on a collective level, it necessarily is also shared between different actors.

However, when a term grows so extensive it starts to entail everything, its usability tends to diminish. That is why in this thesis, too, knowledge flows are approached from Mäki's (2008, pp. 52, 53) phrasing of "sharing and transferring information and knowledge within an organization." Thus, the terms knowledge sharing, knowledge transfer and knowledge flows are used synonymously throughout the thesis. The chosen point of view towards the flows is, furthermore, that of the content, i.e. the knowledge itself: what are the channels through which it moves, both regarding the technological tools, procedural habits, structural choices and the relationships of the people through which it flows.

As mentioned above, knowledge in this thesis is understood as including the full spectrum of content from the most explicit (e.g. written manuals) to the most tacit (e.g. feelings and beliefs of individuals). Furthermore, knowing is seen as being part of knowledge itself, for without the understanding of how to apply it, knowledge is useless. Thus, knowledge flows can be seen as streams of facts, instructions, know-how, experience, knowing, relationships, trust, feelings, impressions and other aspects of knowledge running between people – at the most basic level – and within groups and organizations at the more abstract levels.

As water always finds its way through different terrains and creates rivers and streams, so does knowledge always flow between people, sometimes as strongly as a torrent, sometimes as slightly as a weakest brook. Nevertheless, like people have built canals to direct the flowing of water, so can organizations build *knowledge canals* to facilitate knowledge flowing between people who are farther away from each other. These canals, in this thesis, are especially the intentional structural, procedural and cultural choices an organization makes to ensure knowledge truly flows between different people, functions and locations. It must be noted, however, that it is most unlikely that knowledge could be so strictly harnessed that it would only run through built canals, but it will always find also – or even mainly – its own, self-made *knowledge riverbeds* to flow freely through (Chen & Huan, 2007; Huysman & de Wit, 2004). This is also as it should go, for, as Nahapiet & Ghoshal (1998, p. 252) note, "social relations, often established for other purposes, constitute information channels that reduce the amount of time and investment required to gather information." Followingly, I conceptualize the *channels* through which knowledge flows to be either formal canals or informal riverbeds.

Finally, even though this thesis aims to find ways to facilitate knowledge flows on *organizational* level, it assumes that this happens for a large part by facilitating work practices of and social relationships between *individuals*. On the most basic level knowledge sharing is communication, and "[t]he challenge in an organizational setting is thus to ask how we can extend the knowledge sharing practices that continuously take place in human interaction --- to a larger organizational scale." (Bjørkeng et al., 2004, pp. 164, 165) Or, in other words, how can we steer riverbeds into the direction the organization needs them to go, and expand them into organization-wide canals.

In this chapter I introduce main literature and findings regarding knowledge sharing, transfer and flows. I concentrate especially on Ipe's (2003) model of factors affecting knowledge sharing, and on Boh's (2007)

framework of different knowledge sharing mechanisms. Additionally, I discuss findings on specifically knowledge sharing in global organizations and in virtual settings.

2.2.1 FACTORS AFFECTING KNOWLEDGE SHARING

Ipe (2003) has identified from the literature four factors that influence knowledge sharing in organizations at the most basic level, i.e. between individuals: *the nature of knowledge*, *motivation to share*, *opportunities to share*, and *the culture* of the work environment, presented in Figure 5 below. Of these factors, the nature of knowledge is related to the *content* of the knowledge flows, i.e. the *knowledge* itself; motivation to share is related to the *people* between whom knowledge flows; opportunities to share comprise the *channels* through which the knowledge ends up running; and culture forms the organizational *context* within which knowledge is shared.

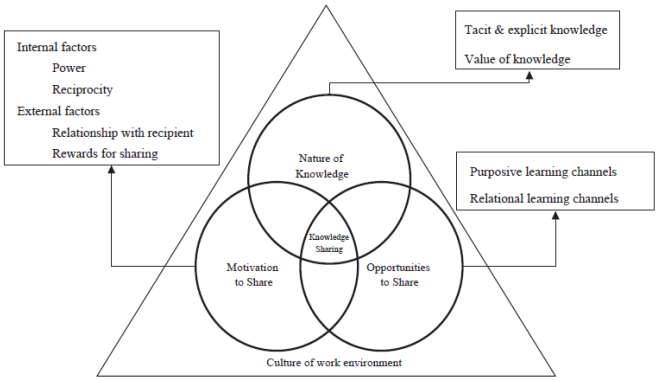

Figure 5. Factors affecting knowledge sharing in organizations (Ipe, 2003)

By *the nature of knowledge* Ipe (2003) refers to both the explicit-tacit continuum and the value that is attributed to the knowledge in question: this factor is related to the knowledge itself. As discussed above, tacit knowledge is difficult to be articulated and shared, and even most of it tends to be sharable only in face-to-face communication (Joia & Lemos, 2010; Goh, 2002; Bhatt, 2001; Gupta & Govindarajan, 2000b; Haldin-Herrgard, 2000; Swan et al., 1999; Fahey & Prusak, 1998; O'Dell & Grayson, 1998). Followingly, tacit knowledge "cannot be managed and shared as explicit knowledge" (Haldin-Herrgard, 2000, p. 357), and "tacitness of knowledge is a natural impediment to the successful sharing of knowledge" (Ipe, 2003, p. 344). Nevertheless, it must be noted that even though some explicit knowledge can be easily codified, stored and transferred via electronic media, it is however not necessarily easily *received*, for it still might be e.g. context-dependent, narrowly applicable or lack the necessary metadata required for finding and using it (Mäki, 2008; Ipe, 2003). Accordingly, Mäki (2008, p. 156) remarks that "storing information and knowledge does not have much value if reusability cannot be guaranteed." In addition to the tacitness, also the value accredited to the knowledge affects its shareability: "in several settings, individual knowledge is linked to status, career prospects, and individual reputations" (Ipe, 2003, p. 345), possibly resulting in knowledge hoarding instead of its sharing.

According to Huysman & De Wit (2004, p. 90), "knowledge sharing cannot be forced; people will only share knowledge if there is a personal reason to do so." Factors affecting individuals' *motivation to share* can be further divided into internal and external factors (Ipe, 2003). *Internal* factors are the power attached to the knowledge and the expected reciprocity resulting from sharing it, whereas *external* factors are the relationship

with the recipient and rewards gained from sharing (Ipe, 2003). The power attached to the knowledge describes the same phenomenon as the above-mentioned value of knowledge, and the significance of reciprocity, relationships and trust will be discussed further below in relation to the organizational culture's effects on knowledge sharing. Detailed discussion of the positive and negative effects rewards may have on knowledge sharing is beyond the scope of this thesis, but to summarize, it seems that even though knowledge sharing can to some degree be *pushed* by explicit rewards, part of it can only be *encouraged* by supportive organizational culture, and another part still can even be hindered by external rewards (Edmondson & Lei, 2014; Foss et al., 2009; Milne, 2007; Bartol & Srivastava, 2002; Bock & Kim, 2002; Osterloh & Frey, 2000).

Whereas the nature of knowledge is a factor deriving from the knowledge itself, the motivation to share is a factor related to individuals sharing it. Riege (2005, p. 23) remarks that *individual barriers* to knowledge sharing are "often related to factors such as lacking communication skills and social networks, differences in national culture, overemphasis of position statuses, and a lack of time and trust." It must be noted, however, that even though these barriers present themselves on the individual level, most of them can be influenced by organizational factors such as communication and cultural trainings and rearranging the work in a way that allows more slack time for employees to interact freely and creatively (Joia & Lemos, 2010; Riege, 2005; Haldin-Herrgard, 2000).

Ipe (2003) divides the *opportunities to share* knowledge into *formal* and *informal* ones or *purposive* and *relational learning channels*, respectively (thus implying the congruence between knowledge sharing and learning). The purposive channels include all the means an organization establishes in order to facilitate knowledge sharing, e.g. training programs, work teams and IT tools for communication and knowledge sharing, and they "not only create a context in which to share knowledge but also provide individuals with the tools necessary to do so" (Ipe, 2003, p. 349). Even though formal channels may connect a great number of employees to each other and enable knowledge to be quickly disseminated to a broad audience, it seems that mainly explicit knowledge gets to be shared through them (Joia & Lemos, 2010; Ipe, 2003). Accordingly, "the most amount of knowledge is shared in informal settings", which include "personal relationships and social networks" (Ipe, 2003, p. 349). Ipe (2003) also notes that even when an organization has designed channels for communication, people often prefer acquiring knowledge from their personal networks. Followingly, to provide opportunities to share knowledge organizations should, in addition to the formal canals, also facilitate the flourishing of personal and trusting relationships between individuals, in order to keep the informal riverbeds open and easy-flowing (Chen & Huan, 2007).

The opportunities to share are mainly organizational factors, and Riege (2005) lists hierarchical organizational structure and non-supportive organizational culture among the *organizational barriers* to knowledge sharing. Additionally, not valuing in the strategy and in the incentive system, and not communicating clearly the value of knowledge sharing within the organization may block knowledge flows, and competitiveness within or between functions or departments can hinder knowledge sharing (Riege, 2005). Furthermore, lack of formal and informal shared spaces and mechanisms as well as organizational resources allocated to knowledge sharing thwart knowledge from flowing. Finally, Riege (2005) remarks that not prioritizing knowledge retention of skilled and experienced employees poses a barrier to knowledge sharing.

Ipe (2003) includes in the opportunities to share also the technologies that are used to sharing knowledge, and Riege (2005, p. 23) notes that technological barriers to knowledge sharing "seem to correlate with factors such

as the unwillingness to use applications due to a mismatch with need requirements, unrealistic expectations of IS/IT systems, and difficulties in building, integrating and modifying technology-based systems." Especially noteworthy in Riege's (2005) listing is the fact that none of them is related purely to *technologies* themselves, but *difficulties in using* them for various reasons. This is consistent with Mäki's (2008, p. 154) study where it was found that "the imperfect use of IT tools was due to their poor usability and organizationally inconsistent ways of using them."

Finally, Ipe (2003, p. 350) notes that "regardless of what organizations do to manage knowledge, the influences of the organization's culture are much stronger." As organizational culture and its effects on knowledge flows will be discussed in detail below, they are here not elaborated on further.

It must be noted, nevertheless, that Ipe's (2003) model approaches knowledge sharing from the viewpoint of the *sharer*; however, knowledge cannot truly be said to be shared unless the recipient has *received*, *understood* and grown *capable of using* it. This requires at least some common ground and shared language between the parties, to overcome the problems related to the stickiness of knowledge described above, as well as *absorptive capacity* from the side of the recipient. Absorptive capacity means an individual's or an organization's ability to evaluate, utilize, assimilate and apply new knowledge, and it is largely dependent on the actor's prior knowledge and experience (Cohen & Levinthal, 1990). However, as the point of view in this thesis is organizational, not individual, the capabilities of the individual recipients of knowledge are not discussed in detail.

Of the four factors affecting knowledge sharing described by Ipe (2003), especially the culture and the opportunities to share are relevant in this thesis: organizational culture is one of the knowledge enablers studied, and the opportunities to share can be said to form the channels through which knowledge ends up flowing.

2.2.2 KNOWLEDGE SHARING MECHANISMS

Boh (2007) presents four *knowledge-sharing mechanisms* that are a close approximate to what is meant by *practices* in this thesis. Boh (2007) uses the same two dimensions of knowledge discussed above, namely tacit-explicit and individual-collective, but with names *personalization-codification* and *individualization-institutionalization*. She states that knowledge sharing mechanisms are often only discussed in the dimension of codification and personalization while the other dimension tends to be dismissed. Furthermore, personalized mechanisms are often assumed to be informal and codified mechanisms formal, but Boh (2007) notes that this is not always the case, but it can be vice versa: organizations can have formally established knowledge sharing mechanisms that still emphasize personalized mechanisms – e.g. regular face-to-face or online meetings – and informal mechanisms for sharing codified knowledge, e.g. project managers sharing their reports with each other outside any formal procedures. Followingly, also Boh (2007) introduces 2x2 matrix of knowledge-sharing mechanisms presented below in Figure 6. However, Boh (2007) does not give labels to the different quadrants, whereas I have named them as *companionship*, *cooperation, flowing* and *stocking* (borrowing the last two terms from DeCarolis & Deeds (1999)). Furthermore, as is the case of knowledge where knowing is the part of knowledge that is beyond conceptualizations, so is *collaboration* in general a mixture of all these mechanisms.

Figure 6. Different knowledge sharing mechanisms (applied from Boh (2007))

Companionship comprises the personalized and individualized mechanisms included in social networks, such as co-workers casually sharing knowledge at water coolers or coffee machines. These mechanisms are used "at the individual level in an ad hoc and informal manner" (Boh, 2007, p. 33). *Cooperation* mechanisms as well are individual, informal and ad hoc by nature, but the shared knowledge is in codified form, e.g. colleagues sharing their project plans, presentations or reports with each other. *Stocking* mechanisms, on the other hand, rely on central knowledge repositories where knowledge is stored in codified form, and (hopefully) retrieved and reused in new situations. Finally, *flowing* mechanisms are mechanisms organizations formally establish to facilitate organizational level, person-to-person knowledge sharing. Boh (2007, p. 35) provides as an example of this kind of mechanisms that "organizations can designate specific individuals as subject-matter experts and provide access to these experts." Communities of practice (Wenger & Snyder, 2000; Brown & Duguid, 1991, 1998, 2001), which will be described in greater detail below in chapter 2.3.2, fall into this area as well.

Boh (2007) further proposes that task complexity and the size and geographical dispersion of the organization affect the choice of what mechanisms to select. According to her, *task complexity* is the main factor in deciding between codified and personalized strategies: the more unique and complex the task, the more there is a need for personalized mechanisms, whereas standardized and routine tasks can often be handled with codified mechanisms. When choosing between individualized and institutionalized mechanisms, Boh (2007) proposes that the *size and geographical dispersion* are essential factors: for small and collocated organizations, individual mechanisms might well suffice, whereas large and dispersed organizations will need institutionalized mechanisms to ensure knowledge flowing between different individuals, functions and locations.

According to Boh (2007, p. 32), "Institutionalized mechanisms, therefore, enable organizations to more effectively exploit the knowledge in the organization, by creating reliability in repeated experiences, and refining knowledge through repeated use and reflections." As in this thesis the emphasis is on the organizational level, the institutionalized mechanisms of flowing and stocking are of special interest, even though the facilitation of the individual level mechanisms of companionship and cooperation is as well an indispensable part of ensuring knowledge truly flows between different locations of an organization.

2.2.3 KNOWLEDGE FLOWS IN GLOBAL CONTEXTS

Today's organizations are more and more geographically dispersed by nature, and the distance between the employees and units necessarily affects also knowledge flows within organizations (Bell & Zaheer, 2007; Newell et al., 2007; Newell et al., 2002; Bhatt, 2001). According to Newell et al. (2002, p. 15), "As businesses are stretched across time and space, reorganized along process or product lines and restructured around virtual teams and networks, they also inevitably lose opportunities for casual sharing of knowledge and learning induced by physical proximity."

The main factor of dispersed working is the absence of *copresence* among the employees, and the resulting possible challenges mentioned in the literature include *building relationships and trust* (Nordbäck, 2018; Bell & Zaheer, 2007; Newell et al., 2007; Riege, 2005; Govindarajan & Gupta, 2001; Jarvenpaa & Leidner, 1999; Jarvenpaa et al., 1998); *creating a shared understanding* (Nordbäck, 2018; Olson & Olson, 2000; Swan et al., 1999); *communicating effectively and unambiguously* (Riege, 2005; Govindarajan & Gupta, 2001; Nohria & Eccles, 1992); and *coordinating tasks* (Nordbäck, 2018).

As discussed above, due to the sticky and tacit aspects of knowledge its sharing often requires face-to-face communication that is difficult to arrange in dispersed settings (Joia & Lemos, 2010; Bell & Zaheer, 2007; Goh, 2002; Bhatt, 2001; Gupta & Govindarajan, 2000b; Haldin-Herrgard, 2000; Swan et al., 1999; Fahey & Prusak, 1998; O'Dell & Grayson, 1998). Thus, it can be argued that especially the sharing of tacit knowledge may encounter challenges in dispersed settings. Furthermore, the distance inhibits the creation of *common ground*, "that knowledge that the participants have in common, and they are aware that they have it in common" (Olson & Olson, 2000, p. 157). Swan et al. (1999, p. 270) point out that "some knowledge must be possessed by individuals even if they do not regularly need it because it allows them to engage with and interpret or make sense of the knowledge of others", thus emphasizing the need to build common ground between the distant units. Nonaka and colleagues (Nonaka et al., 2000; Nonaka, 1994) refer to this same need to have common ground as the *redundancy of knowledge*, and states that to be essential factor in enabling knowledge creation, whereas Alavi & Leidner (2001) describe the same phenomenon with the term *shared knowledge base*.

Gupta & Govindarajan (2000a) have studied knowledge flows within global organizations both in hierarchical or *vertical* and lateral or *horizontal* directions: vertical flows refer to the flows between the headquarters and a subsidiary, department or unit located elsewhere, whereas horizontal flows refer to the flows between the dispersed units. The authors propose that the main factors affecting knowledge flows in these two distinct settings are related to the *value* of the knowledge in question, knowledge sharer's and recipient's *motivation* towards sharing and receiving knowledge, the *richness* of the transmission channel and the *absorptive capacity* of the receiver. Gupta & Govindarajan (2000a, p. 490) additionally note that the most common flows within global settings are the outflows from the headquarters to the distant units, even though "direct inter-subsidiary interactions are becoming increasingly important."

There are several ways to mitigate the challenges related to the dispersion of organizations. The most significant one, ensuring that trust can be and is built and maintained (Newell et al., 2007; Jarvenpaa & Leidner, 1999; Jarvenpaa et al., 1998), will be discussed in more detail below in relation to organizational culture. Furthermore, communication and leadership need relatively more attention and planning in dispersed settings, to work efficiently, than in collocated settings (Nordbäck, 2018; Neeley, 2015; Ferrazzi, 2014; Majchrzak et al., 2004). As employees from different locations have higher threshold for initiating communication via

electronic media, dispersed organizations might, furthermore, need more established mechanisms pushing people to communicate: there might be e.g. a need to agree explicitly on communication frequency, rapidity of responses to messages via different media, etiquette and behavioral guidelines, and technologies to be used (Nordbäck, 2018; Neeley, 2015; Ferrazzi, 2014; Majchrzak et al., 2004).

2.2.4 THE KNOWLEDGE FLOW CIRCLE

I have in this chapter presented quite many different perspectives through which to observe knowledge flows, all with their own vocabularies. To help the reader to follow the upcoming discussion, these are summarized in Figure 7 below.

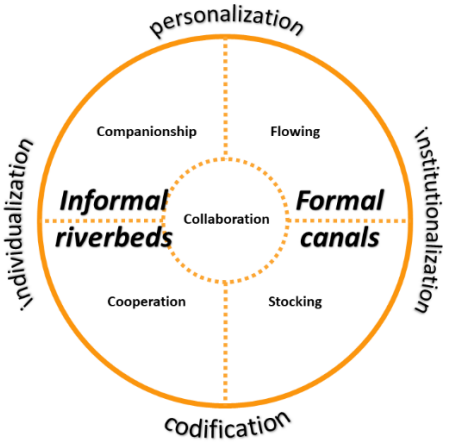

Figure 7. The knowledge flow circle (applied from Ipe (2003) and Boh (2007))

On the left side of the knowledge flow circle, there are the *informal riverbeds* through which knowledge flows on the *individual* level, between employees who have formed e.g. friendships or other connections enabling them to share knowledge on the side of the formal channels. On the right side of the figure, then, are the *formal* or *institutionalized canals* the organization has intentionally created in order to enhance the organization-wide knowledge flows.

The upper half of the circle includes the *personalized* mechanisms of *companionship* and *flowing*, whereas the lower half includes the *codified* mechanisms of *cooperation* and *stocking*. As discussed, both personalized and codified mechanisms can be formal and informal, and organizations can nurture, though not strictly manage, also the riverbeds. However, the focus in this thesis is especially on the formal canals, i.e. the institutionalized mechanisms an organization establishes to facilitate knowledge flows.

2.3 KNOWLEDGE ENABLERS

In the context of this thesis, knowledge enablers are simply the factors facilitating the knowledge processes within an organization. Knowledge processes, as discussed above, describe the actions altering knowledge in the organization, whereas "enablers provide the infrastructure necessary for the organization to increase the efficiency of knowledge processes" (Lee & Choi, 2003, p. 181). Thus, knowledge enablers are the key focus of this thesis.

There are different classifications regarding knowledge enablers in the literature (von Krogh et al., 2001; Ichijo et al., 1998), but here only Lee & Choi's (2003) conceptualization is discussed, as it aptly summarizes the

aspects relevant for this thesis. According to these authors, there are four different knowledge enablers: *culture*, *structure*, *people* and *technology*, which will be introduced in this chapter. Additionally, also *organizational work practices* are proposed to be significant knowledge enablers, which will be discussed in more detail in chapter 2.3.5 below.

2.3.1 ORGANIZATIONAL CULTURE

The importance of organizational culture as one of the most significant knowledge enablers within organizations is quite unanimously agreed on (Mueller, 2014; Casimir et al., 2012; Zheng et al., 2010; Al-Alawi et al., 2007; Alavi et al., 2005; Levin & Cross, 2004; Ipe, 2003; Janz & Prasarnphanich, 2003; Goh, 2002; McDermott & O'Dell, 2001; De Long & Fahey, 2000; von Krogh, 1998). McDermott & O'Dell (2001, p. 77) even point out that "however strong your commitment and approach to knowledge management, your culture is stronger." Nevertheless, there is no unequivocal definition of what is meant with culture, and different authors' concepts vary; as De Long & Fahey (2000, p. 115) note, "Culture is not only intangible and illusive, but it can also be observed at multiple levels in an organization."

One of the broadest definitions of organizational culture includes into the concept "information systems, people, process, leadership, reward system and organization structure" (Al-Alawi et al., 2007, p. 23), leaving hardly anything out of its scope. On the other hand, the often-used conceptualization by Schein (1990; also Mueller, 2014; Alavi et al., 2005; McDermott & O'Dell, 2001) pictures culture as existing at three levels: *observable artifacts* or *manifestations*, *values*, and *basic assumptions*. The *artifacts* include everything observable about the culture, e.g. physical layout of the premises, the dress code, symbols, organizational stories, and the level of formality in how people address each other. The espoused *values* include the norms, ideologies and mission and vision statements of the organization, whereas the deeply-rooted, often unconscious underlying *assumptions* "determine perceptions, thought processes, feelings, and behavior" (Schein 1990, p. 112). A detailed discussion on what culture ultimately is, nevertheless, is outside the scope of this thesis. It is simply stated that culture is "something an organization is, rather than something an organization has" (Robertson & Swan, 2003, p. 831), and in this chapter the findings related to the effects organizational culture has on knowledge flows and organizational learning are introduced.

De Long & Fahey (2000) identify four different ways how culture affects knowledge processes within organizations. Firstly, the deep assumptions about *what knowledge is* in the first place, and *what knowledge is valuable*, are influenced by culture; e.g. tacit knowledge embodied in employees working at the grassroots may not be at all recognized or valued within some organizations. Secondly, culture "defines *the relationship between individual and organizational knowledge*" (De Long & Fahey, 2000, p. 113, emphasis added), and may make it acceptable to e.g. hoard knowledge instead of sharing it. Thirdly, culture creates *a context* for knowledge use and interactions, e.g. what IT tools to use or how quickly to respond to messages from colleagues. Finally, culture *shapes knowledge creation and adoption processes* by e.g. either allowing or prohibiting questioning and debating.

Ba is a concept closely related to organizational culture and developed by Nonaka and colleagues in connection with the SECI model (Nonaka et al., 2000; Nonaka & Konno, 1998). *Ba* is a shared space or mutual context where knowledge processes take place, and it can be physical, virtual and mental. According to Nonaka & Konno (1998, p. 40), "If knowledge is separated from *ba*, it turns into information, which can then be communicated independently from *ba*." Thus, like organizational culture creates the *context* within which

individuals can have *a shared knowledge base* (Alavi & Leidner, 2001) and *common ground* (Olson & Olson, 2000), so *ba* can form a shared space where *redundancy of knowledge* can abound, thus enabling knowledge sharing and creation (Nonaka et al., 2000; Nonaka & Konno, 1998).

Trust within organizations (Swift & Hwang, 2013; Casimir et al., 2012; Newell et al., 2007; Levin & Cross, 2004; Jarvenpaa & Leidner, 1999; Jarvenpaa et al., 1998; McAllister, 1995) is an aspect of culture that is researched broadly within the literature regarding knowledge sharing. McAllister (1995, p. 25) defines interpersonal trust as "the extent to which a person is confident in, and willing to act on the basis of, the words, actions, and decisions of another" and divides it into *affective* and *cognitive* dimensions. Affective or affection-based trust is built on the emotional bonds between people, whereas cognitive or cognition-based trust builds on the perceived competence and reliability of the others (Swift & Hwang, 2013; McAllister, 1995). Furthermore, there is also an ex-ante element in trust: *swift trust* refers to the individuals acting "as if trust is present from the start" (Jarvenpaa et al., 1998, p. 56), even before there have been any grounds to build trust on. This initial trust is easily broken if the actions of the trustee do not support the presupposition of their trustworthiness (Jarvenpaa et al., 1998). According to Swift & Hwang (2013) affective trust is more important than cognitive in facilitating the sharing of knowledge between individuals, whereas cognitive trust affects more the building of an environment facilitating organizational learning.

Psychological safety is a concept closely related to trust (Edmondson & Lei, 2014; Siemsen, 2009; Edmondson, 1999). It describes "perceptions of the consequences of taking interpersonal risks in a particular context" (Edmondson & Lei, 2014, p. 22), i.e. *trusting* that "the team will not embarrass, reject, or punish someone for speaking up" (Edmondson, 1999, p. 354). Like high levels of trust, also high psychological safety increases knowledge sharing within organizations (Siemsen et al., 2009).

The literature suggests that cultures facilitative to knowledge sharing and other knowledge processes are oriented towards openness, collaboration, learning and empathy (Mueller, 2014; Jacks et al., 2012; Al-Alawi et al., 2007; Alavi et al., 2005; Janz & Prasarnphanich, 2003; Goh, 2002; De Long & Fahey, 2000; von Krogh, 1998), whereas tightly controlled culture and intolerance towards mistakes impede knowledge processes (Chang & Lin, 2015; Riege, 2005). Riege (2005, p. 25) notes that "rather than recognising and correcting mistakes, they all too often are covered up, blamed on others, explained away, punished or ignored."

Building trust in virtual and global settings is even more challenging than in contexts where copresence is possible (Nordbäck, 2018; Newell et al., 2007; Jarvenpaa & Leidner, 1999; Jarvenpaa et al., 1998). According to Jarvenpaa and colleagues (Jarvenpaa & Leidner, 1999; Jarvenpaa et al., 1998) and Newell et al. (2007), swift trust is an important antecedent of building trust in virtual collaboration, and trust might even be "somewhat depersonalized" (Jarvenpaa & Leidner, 1999, p. 812) in virtual teams: "the objective of institutional trust building is to build trust based on professional roles rather than specific individual personalities or personal relationships" (Newell et al., 2007, p. 167). Especially in the virtual settings, e.g. the following aspects increase forming of trust and succeeding in the tasks: clarity of goals and responsibilities; guidelines on how often to communicate and how quickly to respond to others' messages; positive-toned and substantive feedback on others' work; keeping others on track about one's own work; and, even if the discussion keeps on the task-level instead of delving into more personal subjects, showing empathy and support in all communication (Nordbäck, 2018; Newell et al., 2007; Jarvenpaa & Leidner, 1999; Jarvenpaa et al., 1998).

2.3.2 ORGANIZATIONAL STRUCTURE

Organizational structure may be discussed from many different perspectives. The traditional one observes an organization through its level of centralization, i.e. the locus of decision-making authority within an organization (Zheng et al., 2010; Chen & Huan, 2007; Lee & Choi, 2003; Grant, 1996), and it can be depicted with hierarchies and organization charts. On the other hand, informal structure refers to actual networks and relationships between the employees, possibly revealing a remarkably different understanding of the decision-making processes within the organization (Hansen, 1999; Krackhardt & Hanson, 1997; Granovetter, 1973). In this chapter I introduce these two perspectives and their relationship with smooth knowledge flows and organizational learning. However, the main focus in this thesis is on the formal structure, and the informal is only described to provide the reader with the overall picture of the subject.

Formal organizational structure

Formal organizational structure refers to a relatively stable configuration of tasks and activities (Zheng et al., 2010) which are often described in organization charts. The traditional structures in organizations have been strongly centralized, meaning that the formal authority and decision-making power have been imposed to a few leaders, whereas employees lower in hierarchy have mainly carried out the decisions and plans of the leaders. According to Zheng et al. (2010, p. 765), however, "the majority of scholars have agreed that a decentralized organizational structure is conducive to organizational effectiveness", and also Riege (2005, p. 27) notes that "knowledge sharing seems less likely to occur in highly structured, multi-layered, and hierarchical organisations and the usually corresponding top-down communication flow. Whereas in relatively flat organisations, with communication flows that are not restricted in one direction ---, knowledge sharing is more likely to occur". Furthermore, centralization has negative effects on trust, communication and coordination (Zheng et al., 2010; Chen & Huan, 2007), as well as on knowledge creation (Lee & Choi, 2003). In the last decades new forms of organizing have emerged to answer to this concern: matrix and project organizations, flat hierarchies, adhocracies, holacracies and other forms of self-managing and team-based organizations have gained more and more popularity (Bernstein et al., 2016; Hamel, 2011; Newell et al., 2002; Drucker, 1988). The current evidence suggests that in terms of smooth knowledge flows and organizational learning, flat hierarches and quite decentralized organizational structures are usually more effective (Joia & Lemos, 2010; Zheng et al., 2010; Chen & Huan, 2007; Lee & Choi, 2003; Newell et al., 2002).

Lam (2000) has categorized different organizational forms or structures based on what kind of knowledge is mostly needed in the organization in question. She states that when an organization mainly depends on explicit knowledge, it can standardize its tasks and work roles and thus have a higher level of centralization, whereas when the most needed knowledge is tacit by nature, an organization must rely more heavily on decentralized practices and informal coordination mechanisms. Furthermore, according to Lam (2000, p. 493) organizational structures can also be viewed from the perspective of knowledge agency: organizations which "rely heavily on key individuals will tend to accord them a high degree of autonomy", whereas when the main agent is a collective, the organization "will need to develop effective mechanisms for integration and coordination." Lam's (2000) framework including the four knowledge types of embrained, encoded, embodied and embedded, and four organizational forms of *professional bureaucracy, machine bureaucracy, operating adhocracy* and *J-form organization*, is presented in Figure 8 and discussed in more detail below.

Figure 8. Different organizational forms (applied from Lam, 2000)

According to Lam (2000) a *professional bureaucracy* is an organizational form where the needed knowledge is mainly embrained, i.e. explicit and residing mainly in individuals. The works tasks are highly standardized, and even though the individual expert employees have a high degree of autonomy, their actions are limited by clear rules and routines, as well as pre-determined plans and schedules. Professional bureaucracies are often highly specialized, not valuing tacit knowledge, and sharing knowledge across functional boundaries tends to be limited. Additionally, the high specialization hampers knowledge creation and allows learning to happen only in a narrow scope of formal specialist knowledge.

A *machine bureaucracy* relies on encoded knowledge, and "the key organizing principles are specialization, standardization and control" (Lam, 2000, p. 495). The dependence on individuals and tacit knowledge is tried to be minimized, and the rules, procedures and standards set by the formal management guide the operations. In machine bureaucracies the application and generation of knowledge are strictly separated, and knowledge is highly fragmented, only being integrated at the higher levels of the hierarchy. This structure is efficient in stable environments and routine situations, but it cannot adapt quickly to novel situations and changes. (Lam, 2000)

An *operating adhocracy* is the opposite of a machine bureaucracy: whereas the latter is strict, slow and stable, the former is fluid, adaptive and flexible in responding to changing situations (Lam, 2000; Minzberg, 1980). Operating adhocracies depend on embodied knowledge: both formal knowledge and tacit know-how of individuals, who are given great autonomy and little standards and rules for their work. The individual experts independently communicate and coordinate their work, share knowledge and jointly solve problems in an ad-hoc basis and without the support of formal hierarchies or written rules. Even though operating adhocracies are innovative and fast to adapt, they may have problems in knowledge accumulation and retention: often no one is responsible of articulating and sharing the knowledge residing in individuals and thus only individuals, not the whole organization, learn (Newell et al., 2002; Lam, 2000). Furthermore, as the organization depends on individuals, it can easily lose huge parts of its knowledge if some key individuals leave the organization (Lam, 2000).

According to Lam (2000, p. 497), an organization relying heavily on embedded knowledge is best structured as a *J-form organization*: "The J-form organization combines the stability and efficiency of a bureaucracy with the flexibility and team dynamics of an adhocracy." A J-form organization consists of three layers: the formal

hierarchical managerial system; an organic, non-hierarchical team-based system; and a strong organizational culture gluing together the first two layers. The basic structure or a J-form organization is depicted in Figure 9 below. Nonaka (1994) refers to this type of organization as a *hypertext organization* and argues that this organization type best facilitates the interaction between tacit and explicit knowledge, and thus new knowledge creation. Lam (2000) depicts the team-level as the intersection of the horizontal and vertical knowledge flows, enabling interaction, learning and knowledge diffusion in a J-form organization. While the second layer is mainly in charge of the acquisition and generation of knowledge, the first one, namely the formal structure, captures, stores and disseminates the generated knowledge into the whole organization. Or, in Nonaka's (1994, p. 33) terms, "while hierarchical formal organization mainly carries out the task of combination and internalization, self-organizing teams perform the task of socialization and externalization."

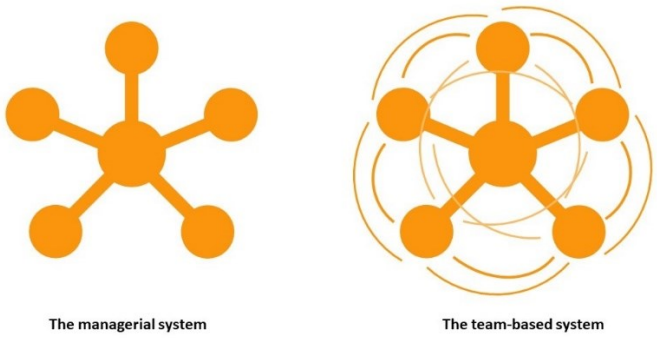

Figure 9. The J-form organization (applied from Lam (2000))

The second layer of Lam's (2000) J-form organization is close to the construct of *community of practice (CoP)* made popular by especially Wenger and colleagues (Wenger & Snyder, 2000) and Brown & Duguid (1991, 1998, 2001). Initially, CoPs were seen as forming informally and being only *detected* by the management, and defined as "groups of people informally bounded together by shared expertise and passion for a joint enterprise" (Wenger & Snyder, 2000, p. 139; also Huysman & de Wit, 2004; Grover & Davenport, 2001). More recently, however, CoPs have become "an actively managed part of the organization, with specific goals, explicit accountability, and clear executive oversight" (McDermott & Archibald, 2010, p. 84). CoPs differ from formal teams, however, in four aspects: they have a *long-term goal* of developing a specific knowledge area instead of producing a specific deliverable; they have *collective responsibility* and only facilitative leaders, not ones who would have authority over other members; they *seek to expand* instead of staying stable; and they *have responsibility for organizing*, articulating and applying all the organization's knowledge in their specific knowledge areas instead of only solving one specific problem (McDermott & Archibald, 2010). Communities of practice often form spontaneously within organizations, but they can and often should be cultivated and nurtured in order to effectively harvest their benefits: CoPs can e.g. solve problems quickly, share best practices effectively and develop employees' skills and capabilities (Wenger & Snyder, 2000). Nevertheless, seeing and measuring the value of CoPs can be challenging, as their results are often delayed and appear in teams or business units instead of the communities themselves, and it might be difficult to evaluate whether the knowledge acquired thanks to the community might have been gathered from another source had the community not existed (Wenger & Snyder, 2000).

As this thesis seeks to find an organizational structure that mostly facilitates organizational learning and flowing of knowledge within a global, knowledge-intensive organization, it seems that Lam's (2000) J-form organization would be a best fit to that need. The vertical line of relationships, i.e. the official hierarchy, cannot ensure horizontal knowledge flows between different regions below the managerial level, and even though the managers at different regions might actively share knowledge, that does not yet guarantee that the knowledge in question would be disseminated further to everyone needing it. Thus, the team-based system or communities of practice built into the structure are needed to enable horizontal knowledge flows between the grassroot level of global organizations.

Informal organizational structure

Informal organizational structure, in this thesis, refers to the network of relationships between the members of the organization. It includes all the social networks within the organization – both those affected by the official structure, and those formed purely on the basis of friendships – and can also be described as social capital (Edelman et al., 2004; Nahapiet & Ghoshal, 1998). Trust and other factors affecting relationships within organizations were discussed more in detail above in relation to organizational culture, and here I only shortly give introduction to the network view on organizational structure and social capital theory.

The basic unit in networks studies are *ties* between people, and especially the significance of *tie strength* is studied extensively in relation to knowledge sharing (Levin & Cross, 2004; Hansen, 1999; Augier & Vendelø, 1999; Krackhardt, 1992; Granovetter 1973). Mark Granovetter, in his seminal article *The Strength of Weak Ties* (1973, p. 1361), defined tie strength being "a (probably linear) combination of the amount of time, the emotional intensity, the intimacy (mutual confiding), and the reciprocal services which characterize the tie." It has been found that weak ties provide access to nonredundant, new knowledge and accelerate the sharing of simple knowledge, whereas complex and tacit knowledge is more easily or even only transferred through strong ties (Levin & Cross, 2004; Hansen, 1999; Krackhardt, 1992; Granovetter, 1973).

Another tradition of literature explaining the relationships between people is the *social capital theory* (McElroy et al., 2006; Edelman et al., 2004; Nahapiet & Ghoshal, 1998). According to Edelman et al. (2004, p. S59), "Social capital is the set of resources that accrue to an individual or group by virtue of their social connections". Furthermore, Nahapiet & Ghoshal (1998, p. 261) note that "social capital is typically a byproduct of other activities."

Even though abundant social capital and dense networks are mainly considered to be a positive factor within organizations, there can be pitfalls to it as well: especially the tendency of high social capital to reduce a group's or organization's openness to new knowledge and alternative ways of doing things (Edelman et al., 2004; Nahapiet & Ghoshal, 1998). Edelman et al. (2004, p. S67) note that "the strong ties at the group level, which give the group identity and cohesiveness, can act as barriers to new information, when viewed at the organizational level", and even claim (p. S62) that "these negative aspects of social capital are more harmful at the organizational level than at the team or project level."

It can be concluded that from the perspective of smooth knowledge flows strong ties are a double-edged sword: on the one hand, they are needed for tacit knowledge to flow between individuals, but on the other, they may hinder flowing of knowledge between different teams and groups. However, an organization highly networked

with weak ties can accelerate the flowing of simple knowledge. Thus, organizations should try to find a fitting balance between strong and weak ties.

2.3.3 PEOPLE

People as knowledge enablers is a subject close to traditional human resources management (HRM). According to Lee & Choi (2003, p. 188), "People are at the heart of creating organizational knowledge". As described above, it is people who create, acquire, share and use knowledge, and their skills and capabilities greatly affect the efficiency of organizational knowledge processes. However, as the emphasis in this thesis is on other enablers, the aspects will be only shortly introduced.

A set of skills often mentioned in relation to efficient knowledge management are *T-shaped* or *boundary-spanning* skills (Reiche, 2011; Lee & Choi, 2003; Hansen & von Oatinger, 2001). Both terms refer to employees' capabilities to think beyond their own, immediate working environment and contribute to the wider organizational processes and goals: T-shaped employees span the boundaries and reach over to other functions, groups and contexts in order to enhance collaborative learning and knowing within the whole organization. Furthermore, general *communication skills*, both verbal and written, are an essential part of effective knowledge sharing (Riege, 2005).

Absorptive capacity, which was already mentioned above, is another ability of employees often described as essential in ensuring organizational learning and facilitating knowledge flows (Cohen & Levinthal, 1990). This term is also related to Chris Argyris' famous concept of *double-loop learning* (Argyris, 1991), meaning the ability to reflect on the faced problems and found solutions, in order to ensure these problems would not occur anymore, instead of only being better prepared to solve them when they do arise again.

Ensuring the employees have the needed skills and capabilities to productively participate in the knowledge processes of the organization has traditionally been a domain of HR department and greatly dependent, firstly, on recruiting skilled individuals in the first place and, secondly, on continuously training and educating them within the organization. Furthermore, in addition to the skills and capabilities, also motivation of the employees can significantly affect their knowledge creation and sharing activities (Milne, 2007; Ipe, 2003). These aspects were shortly discussed above in relation organizational culture and to Ipe's (2003) motivation to share as a factor affecting knowledge flows.

2.3.4 TECHNOLOGY

Even though people are the actors between whom knowledge needs to flow in order for it to be applied and used, technology is an invaluable aid in facilitating this. Riege (2005, p. 20) crystallizes the balance between people and technology by stating that "knowledge sharing is mostly about people and adaptations to the social dynamics of the workplace rather than technology --- However, IS/IT systems play an important support function without which most sharing practices would be less effective and applications less timely."

Alavi & Leidner (2001, p. 114) define knowledge management systems (KMS) as "IT-based systems developed to support and enhance the organizational processes of knowledge creation, storage/retrieval, transfer, and application." Thus, almost any IT tool can be included in the KMS category, purely based on for what purpose it is used for. Alavi & Leidner (2001, p. 114) nevertheless have identified from the literature three common uses of KM systems; "(1) the coding and sharing of best practices, (2) the creation of corporate knowledge directories, and (3) the creation of knowledge networks." The first two are focused on storing and

sharing codified, embrained and encoded, knowledge, whereas the last aims to connect employees to each other, for them to be able to share also embodied and embedded knowledge in personal interaction.

Without technology, many knowledge processes would be difficult or even impossible to carry out (Riege, 2005; Gupta & Govindarajan 2000b). The amount of data and information is so huge that only IT tools can handle them, and the distance – both geographical and temporal – between employees necessitates using different communication media for collaboration. Furthermore, the speed of collaboration and coordination in today's environment is such that without technological tools they would probably be impossible to handle.

Although the value of IT tools in supporting knowledge processes is acknowledged, there is a multitude of literature referring to the problems related to organizational databases, intranets and knowledge directories that have been created without considering the needs and preferences of the people who should be using them (Newell et al., 2006; Riege, 2005; Alavi & Leidner, 2001; McDermott, 1999; Swan et al., 1999; Fahey & Prusak, 1998). Fahey & Prusak (1998, p. 273) point out that "[a]lthough IT is a wonderful facilitator of data and information transmission and distribution, it can never substitute for the rich interactivity, communication, and learning that is inherent in dialogue. Knowledge is primarily a function and consequence of the meeting and interaction of minds."

As the nature of work is becoming more and more networked and collaborative, also technological tools have shifted away from mere databanks towards more collaborative practices. Anders (2016) discusses especially the newly emerged team collaboration platforms (TCP) that integrate instant messaging, collaborative discussions organized into groups or channels, and integrations for other technologies. TCPs, such as *Slack*, *Flowdock* and *Microsoft Teams*, are a new category of IT tools which has not yet been studied extensively, but which have rapidly gained acceptance and praise among the practitioners (Anders, 2016).

According to Anders (2016), in the industry and media TCPs are predicted to change the human behaviour and the daily working practices within organizations adapting them. Anders' (2016, p. 258) findings support these claims, and he concludes that "TCPs support real and meaningful changes in how individuals and organizations communicate and collaborate." TCPs aim to make internal communication "visible, searchable, and available for social collaboration" (Anders, 2016, pp. 227-228), which reduces the need for routine coordination and instead increases collaboration, knowledge sharing, metaknowledge and context awareness, as well as enables boundary-spanning across organizational borders. Furthermore, the compartmentalization of discussions; the possibility to turn notifications on and off according to every employee's needs; the possibility of tagging the employees whose contribution is especially needed; and the polysynchronicity – being synchronous and asynchronous at the same time, and flexibly shifting between these two – aids attention allocation and boosts communication efficiency (Anders, 2016).

Finally, technology can also affect other knowledge enablers in significant ways (Newell, 2016; Nohria & Eccles, 1992). Nohria & Eccles (1992) state that the new technologies can change the fundamentals of organizations in at least four different ways. First, technology can *reduce the need of middle management*, as IT tools can handle many routine tasks that previously needed a human intermediary. Secondly, the improved possibilities of people communicating directly with each other can further *break down the traditional hierarchies*. Thirdly, along the improved ability of organizations communicating with each other also the boundaries of organizations may become blurred, resulting into complex *network organizations*. Finally, the

increased possibilities of data handling and direct communication enable organizations to be more flexible and thus they *facilitate rapid structural changes*.

To summarize, technology and IT tools are an indispensable aid in enabling effective knowledge processes and facilitating smooth knowledge flows, but they only work when designed and implemented according to the needs and preferences of the people using them (Swan et al., 1999). Huysman & de Wit (2004, p. 86) conclude, "Yet, when the technology itself is not efficient enough, or when the use is not adapted to the people working with the technology, people will be driven away, despite rewards or punishments." Finally, in today's world, the rapidly changing technologies can be actors of their own, directly affecting the structure, working practices and culture of organizations.

2.3.5 ORGANIZATIONAL WORK PRACTICES

As mentioned, I could not find literature discussing organizational work practices as knowledge enablers. Practices in general, however, are discussed widely within the KM field, even though often the term is left undefined (Mäki, 2008; Alavi et al., 2005; Huysman & de Wit 2004; Orlikowski, 2002; O'Dell & Grayson, 1998) Thus, in this sub-chapter I explain the meaning of the concept in the context of this thesis.

The term practice itself is almost as elusive as the concept of organizational culture discussed above. O'Dell & Grayson (1998, p. 165) mention one possible definition of best practice to be "[a]ny practice, knowledge, know-how, or experience that has proven to be valuable or effective within one organization that may have applicability to other organizations", thus including almost anything into the term. According to Szulanski (1996, p. 28), "Practice refers to the organization's routine use of knowledge and often has a tacit component, embedded partly in individual skills and partly in collaborative social arrangements." Thus, practices may be related to e.g. organizational structure, human resources management, and choice and use of technologies. The nurturing of communities of practice, as an aspect of organizational structure, is an example of a structural organizational work practice; the convention on whether to use email or instant messaging for internal communication is an example of a practice related to technologies; and the organizational incentive system presents a practice related to HRM. Furthermore, organizational practices can also be defined as the *manifestations* of organizational culture, the first level of Schein's (1990) conceptualization of organizational culture. Thus, the concept of organizational work practices within this thesis *reflects* parts of the other two enablers under consideration, namely organizational culture and organizational structure. Finally, organizational work practices can also be seen as a form of an organization's *embedded knowledge* that it utilizes to effectively conduct different knowledge processes.

Mäki (2008, p. 155) discusses *organizational* or *work practices*, and concludes that, in the cases he studied, "non-uniform work practices impeded the exploitation of knowledge and integration of information and knowledge." Thus, it seems that for knowledge to effectively flow throughout the organization there needs to be at least some harmonization and integration in the applied practices.

As this thesis concentrates on knowledge flows, the practices related to knowledge sharing are of special interest. These include e.g. the schedule for regular meetings; the formal reports and their distribution, as well as knowledge repositories and their usage; the instructions, manuals, and their dissemination through the organization; and the conventional media for communication throughout the organization. These *knowledge sharing practices* are close to the *knowledge sharing mechanisms* (Boh, 2007) and *opportunities to share*

knowledge (Ipe, 2003) discussed above, and these terms are hereafter used quite interchangeably. However, organizational work practices in general include other aspects as well than those related directly to knowledge flows. Furthermore, the practices discussed in this thesis are only *organizational* practices; individual-level practices such as what tools or methods individual employees use to organize their own daily tasks are not discussed – unless they are shared by a larger group of people or the whole organization.

According to Brown & Duguid (1991, p. 40), "the way people actually work usually differ fundamentally from the ways organizations describe that work in manuals, training programs, organizational charts, and job descriptions." Accordingly, organizational practices for knowledge sharing may be both formal and informal, in the terms of Ipe's (2003) opportunities to share, and individualized and institutionalized, in terms of Boh's (2007) knowledge sharing mechanisms.

Finally, O'Dell & Grayson (1998, p. 157) point out that "unless capturing and sharing information are built into the work processes, sharing will not happen." Thus, the practices sought after in this thesis are those which build knowledge sharing and organizational learning into the daily operations of an organization.

2.4 ORGANIZATIONAL LEARNING

While discussion on knowledge flows concentrates on mainly the *knowledge* itself, organizational learning (OL) emphasizes the *application* and *reflection* of that knowledge. The movement of knowledge is not a goal as such, but the learnings and other benefits it enables, or, as Janz & Prasarnphanich (2003, p. 362) phrase it, "organizational performance depends more on the ability to turn knowledge into effective action than knowledge itself." Followingly, in this chapter I discuss the question of how to accelerate knowledge flows into organizational learning.

In the context of this thesis, organizational learning is defined as the long-term *goal* of knowledge flows: it is "a change in the organization's knowledge that occurs as a function of experience" (Argote, 2011, p. 440) and "encoding inferences from history into routines" (Levitt & March, 1988, p. 320). Organizational learning happens when the knowledge existing *in* and *between* individuals and groups becomes *embedded* into the organization through different knowledge processes (Vera & Crossan, 2003).

There are different categorizations of the organizational learning processes, but they tend to be highly similar to the knowledge processes described above. For example, Argote (2011) and Vera & Crossan (2003) see organizational learning as comprising of three sub-processes of *creating*, *retaining*, and *transferring* knowledge, and according to Castaneda et al., (2018), most definitions of OL include knowledge *acquisition* and *creation* as the main components of organization-level learning.

Crossan et al. (1999) suggest that organizational learning consists of four processes – *intuiting*, *interpreting*, *integrating* and *institutionalizing* – and that these 4I processes occur in three levels of individual, group and organization. Individuals can intuit and interpret, groups interpret and integrate, while organizations integrate and institutionalize. Crossan et al. (1999, p. 525) nevertheless note that as "the processes naturally flow from one into another, it is difficult to define precisely where one ends and the next begins." They further state that *insights* first begin within an individual, but while these go through the learning processes, the whole organization can learn as this new knowledge becomes embedded into the organization. "The underlying

assumption is that organizations are more than simply a collection of individuals; organizational learning is different from the simple sum of the learning of its members." (Crossan et al., 1999, p. 529)

Knowledge sharing, interaction and dialogue are an essential part when moving further from mere intuiting, to *words* through interpreting, to *shared understandings* through integrating, and to *routines* and *procedures* through institutionalizing (Crossan et al., 1999). Over time these embedded routines and procedures form the context within which future interactions and individual and group level learning processes take place, both facilitating them – for old knowledge can be exploited – as well as hindering them, by providing borders that might be difficult to be overstepped.

Crossan et al. (1999) link this *feed-forward* towards organizational learning and *feedback* from institutionalized routines into individuals' actions, to the knowledge strategies of exploration and exploitation (Mäki, 2008; March, 1991) described above: as learning proceeds through the four processes of intuiting, interpreting, integrating and institutionalizing, the organization *explores* new knowledge, and when existing routines influence the learning and thinking of individuals, the organization *exploits* its current knowledge base. Crossan et al. (1999) consider learning to be a *dynamic flow* through the three levels back and forth to both directions. In this thesis, I consider the *contents* running within this learning flow to be knowledge, and thus connect learning flows and knowledge flows: the former approaches the same phenomenon from the viewpoint of an actor, whether an individual, a group or an organization, whereas the latter's viewpoint is the knowledge itself. Vera & Crossan (2003, p. 131) phrase this connection followingly: "Learning and knowledge are intertwined in an iterative, mutually reinforcing process: While learning (the process) produces new knowledge (the content), knowledge impacts future learning." This integration of knowledge and organizational learning is depicted in Figure 10 below.

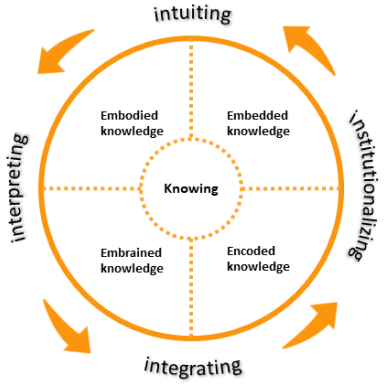

Figure 10. Connecting knowledge types and organizational learning (applied from Lam (2000), Cook & Brown (1999) and Crossan et al. (19999))

In addition to the knowledge types, organizational learning can also be linked to the knowledge creation theory and modes of knowledge creation discussed above (Nonaka & Toyama, 2003; Nonaka & Toyama, 2002; Nonaka et al., 2000; Nonaka & Konno, 1998; Nonaka, 1994). When *intuiting*, an individual *socializes* tacit knowledge from other parts of the organization, be it another individual, group or the organizational culture and knowledge embedded into the fabric of the organization, to become their own *embodied* knowledge. When individuals *interpret* their knowledge, often in dialogue with others, they *externalize* that knowledge into *embrained* form. When individuals and groups *integrate* their knowledge, they *combine* embrained knowledge

into *encoded* form. Finally, when encoded knowledge available to the organization is *institutionalized* it is also *internalized* into the structure, practices and culture of the organization, and thus it forms new *embedded* knowledge. Thus individual, tacit knowledge grows into tacit knowledge of collectives, becoming the context of future individual intuiting. Nonaka (1994, p. 32) further note that "while hierarchical formal organization mainly carries out the task of combination and internalization, self-organizing teams perform the task of socialization and externalization", thus linking learning to the organizational hypertext or J-form structure described above. This synthesis of the models by Cook & Brown (1999), Lam (2000), Nonaka and colleagues (Nonaka & Toyama, 2003; Nonaka & Toyama, 2002; Nonaka et al., 2000; Nonaka & Konno, 1998; Nonaka 1994) and Crossan et al. (1999) is presented below in Figure 11. (Note that the *direction* of the flows is opposite to how Nonaka and colleagues usually draw the conversion process, but the *order* of the processes is the same.)

Figure 11. Connecting knowledge types, organizational learning and knowledge conversion (applied from Lam (2000), Cook & Brown (1999), Nonaka and colleagues (e.g. Nonaka & Konno, 1998) and Crossan et al. (1999))

Due to the difficulties related to sharing tacit knowledge and accelerating it into organization-wide learning, that type of knowledge seems to easily get most of the attention in the literature. However, as at least some part of knowledge still can be codified, it probably also should be. Zollo & Winter (2002) suggest there to be three *learning mechanisms* or *processes* of experience accumulation, knowledge articulation and knowledge codification, these three being close to the above-mentioned learning processes of intuiting, interpreting and integrating. *Experience accumulation* comprises the single-loop, individual learning and accumulation of tacit, embodied knowledge often phrased as *learning by doing* (Argyris, 1991; Zollo & Winter, 2002; Prencipe & Tell, 2001). *Knowledge articulation* then is *learning by reflecting*, and it can be linked with double-loop learning (Argyris, 1991) and with Nonaka and colleagues' concept of externalization: it aims to converting embodied and embedded knowledge into explicit form (Zollo & Winter, 2002; Prencipe & Tell, 2001). *Knowledge codification*, finally, is "an extension of articulation" (Prencipe & Tell, 2001, p. 1379): it aims, through *writing, implementing* and *adapting*, to convert embrained knowledge further into encoded form, for it to be both clearer as well as more easily transferred to and internalized by others (Zollo & Winter, 2002; Prencipe & Tell, 2001). As an example, it is easy to see a connection between these three processes and producing a master's thesis: through my previous experiences – both in studies and other domains of life – I have accumulated embodied knowledge, which through more studying and reflecting has grown into embrained knowledge. Now, while writing, this personal knowledge is both being crystallized to me and encoded into a form hopefully useful to others as well.

Finally, with only these three processes of experience accumulation, knowledge articulation and knowledge codification presented by Zollo & Winter (2002) the organization-wide benefits of codification would be arguable: as discussed earlier, the mere *existence* of encoded knowledge in repositories does not guarantee its *finding*, *appreciating* and *applying* (like the fact of this thesis being written, though undoubtedly bringing enormous advantage to me, does not guarantee anybody else reading and applying the findings from it). Followingly, also Zollo & Winter (2002) point out that these three learning processes together can contribute to the emergence of *dynamic capabilities* of an organization. A dynamic capability, according to Zollo & Winter (2002, p. 340), is "a learned and stable pattern of collective activity", i.e. an organizational routine and, in the framework of Lam's (2000) knowledge types, embedded knowledge. Thus, also Zollo & Winter's (2002) framework can be combined with the above-described *organizational learning circle* comprising of knowledge types, knowledge conversion processes and organizational learning processes. This is depicted in Figure 12 below.

Figure 12. Organizational learning circle (applied from Lam (2000), Cook & Brown (1999), Nonaka and colleagues (e.g. Nonaka & Konno, 1998), Crossan et al. (2009) and Zollo & Winter (2002))

As mentioned above, when discussing knowledge sharing the attention is often on the sharer. The same applies also to the discussion about organizational learning: the debate concentrates mainly on how does individual knowledge *advance* into the organizational level. However, the question of is the organization in question capable of *receiving*, *absorbing* and *applying* that knowledge is of equivalent importance. The above-mentioned absorptive capacity (Cohen & Levinthal, 1990) and dynamic capabilities (Zollo & Winter, 2002) just discussed aim to explain this aspect of organizational learning as well. It can be argued, however, that the flowing of these learning processes from one another in real life might be far from smooth (Swan et al., 2010; Bjørkeng et al., 2004; Huysman & de Wit, 2004; Levitt & March, 1988). Swan et al. (2010, p. 325) conclude that in especially project-based business, "firms generally only learn from projects, if at all, via the accumulation of experience amongst groups and individuals", and further point out that according to their findings, reliance on experience accumulation *precluded*, rather than supported knowledge articulation and codification. Thus, even though in an ideal world there would be time and motivation for individuals, groups and organizations to articulate, reflect and codify their accumulated experience or tacit knowledge, Swan et al. (2010) suggest that in this real world where we are living at the moment it might be more beneficial just to "hire smart people and let them talk to one another" (Davenport & Prusak, 1998, p. 88).

2.5 SUMMARY OF LITERATURE REVIEW

In this chapter I have presented the theoretical foundations of this thesis. In addition to giving brief introductions to the concept of *knowledge* itself and to the field of *knowledge management* I have defined the main terms, concepts and frameworks used.

The main theme of this thesis are *knowledge flows*, i.e. the movement of knowledge within and between people, groups and organizations (Mäki, 2008). Knowledge is seen flowing through different *channels*, both intentionally built formal *canals* as well as through informal *riverbeds* molded by the knowledge itself (Ipe, 2003). The objective of knowledge flows, however, is not the flowing as such, but the different outcomes, especially *organizational learning*, it enables.

Knowledge flows can be facilitated through different *enablers* (Lee & Choi, 2003), and I study especially three of them in this thesis. First of these, *organizational culture*, refers to intangible and illusive *spirit* of the organization, and it can be observed in three levels; *artifacts*, *values* and *basic assumptions* (Schein, 1990). *Trust* is one of the cultural aspects that mostly affect the free flowing of knowledge within organizations (Swift & Hwang, 2013; Casimir et al., 2012; Newell et al., 2007; Jarvenpaa & Leidner, 1999; Jarvenpaa et al., 1998; McAllister, 1995).

The second studied enabler is *organizational structure*. According to the literature, it seems that a *J-form organization* is most facilitative *formal* organizational structure in terms of smooth knowledge flows and organizational learning (Lam, 2000; Nonaka, 1994). In relation to the *informal* organizational structure, on the other hand, organizations should aim to find a fitting *balance* between strong and weak intraorganizational ties (Levin & Cross, 2004; Hansen, 1999; Augier & Vendelø, 1999; Krackhardt, 1992; Granovetter 1973).

Regarding the third enabler, I argue that *knowledge work practices* can also facilitate knowledge flows and organizational learning. As there is not yet literature studying these, I in this thesis explore the subject and aim to shed some light into this new research area. I found, however, that knowledge work practices aimed at sharing knowledge can be observed from the perspectives of knowledge sharing *mechanisms* (Boh, 2007), knowledge sharing *opportunities* (Ipe, 2003), *embedded knowledge* (Lam, 2000), and cultural *artifacts* (Schein, 1990).

Finally, in this thesis I study knowledge flows and organizational learning especially in *global*, *knowledge-intensive organizations*. This dispersed setting poses additional challenges to the flowing of knowledge: e.g. building relationships and trust, creating a shared understanding, communicating, and coordinating tasks effectively is probably more troublesome in global than in collocated organizations (Nordbäck, 2018; Bell & Zaheer, 2007; Newell et al., 2007; Newell et al., 2002; Govindarajan & Gupta, 2001; Olson & Olson, 2000; Jarvenpaa & Leidner, 1999; Swan et al., 1999; Jarvenpaa et al., 1998).

3 METHODS AND DATA

In this chapter I describe the methods used in this thesis as well as introduce the studied case. I first explain why single-case qualitative study was chosen as the research method for this thesis, after which I present the empirical data gathered during the thesis process. Finally, I describe how the gathered data has been analyzed.

3.1 METHODOLOGY

This thesis is *explorative*, rather than descriptive or explanatory (Ghauri & Grønhaug, 2010) by nature, and its aim is "not to test predefined hypotheses, but, rather, to look for patterns in the data that might shed light on the phenomena of interest" (Swan et al 2010, p. 329). Accordingly, the broad objective of this thesis is to find out how can organizational culture, organizational structure, and organizational work practices facilitate organizational learning and knowledge flows within a global, knowledge-intensive organization. According to Yin (2014) a case study is a fitting choice especially when studying a contemporary phenomenon "in depth and within its real-world context, especially when the boundaries between phenomenon and context may not be clearly evident." (Yin, 2014, p. 16) Ghauri & Grønhaug (2010, p. 109) as well note that often when there are too many variables to be considered, case study is the most suitable approach. Thus, studying a real organization and its de facto organizational culture, organizational structure, and organizational work practices might be the only way to find out how these affect learning and knowledge sharing in organizations in general.

The decision to approach the research question with qualitative rather than quantitative methodology was clear to me: I found myself to be "drawn to the fluid, evolving, and dynamic nature of this approach in contrast to the more rigid and structured format of quantitative methods", as Corbin & Strauss (2008, p.13) describe. In general, qualitative methods are seen to take a holistic view and to be more focused on understanding, interpretation and sense-making, rather than testing, critique and finding facts (Tuomi & Sarajärvi, 2018; Ghauri & Grønhaug, 2010; Merriam, 2009; Corbin & Strauss, 2008; Hirsjärvi et al., 2007). As the research problem of this thesis is multifaceted, bound to specific contexts and highly dependent on individuals' interpretations and behaviors, the qualitative approach lends itself more easily to studying it.

The empirical data of the thesis were acquired from three different sources – secondary data from both the case organization and external sources; thematic interviews; and observation – thus allowing *methodological triangulation* (Tuomi & Sarajärvi, 2018, p. 168; Ghauri & Grønhaug, 2010 p. 212; Merriam, 2009, p. 216; Eskola & Suoranta, 2008, p. 68). According to Ghauri & Grønhaug (2010 p. 212), "Through triangulation we can improve the accuracy of judgments and thereby results", and this objective was achieved in this case, as the data from different sources were validated against each other. These three different sources and their methodological justifications are described in more detail below in the respective sub-chapters.

3.2 DATA GATHERING

The data gathered for this thesis consists of secondary data collected from both internal and external sources – such as the case organization's internal documents and related internet pages – 15 thematic interviews; and observation conducted at the organization during several days. The secondary data provided *background information* and *understanding* of the *context* of the case organization and its current *formal* organizational structure and organizational work practices. The interviews – which were the main data source of the study – then offered *understanding* and *insights* on how the work is *in real* conducted at the case organization as well

as on the organizational culture of the organization. Observation furthermore provided the most unbiased view on the culture and practices of the case organization, as the employees did not only *think* of how they worked, but in real *worked* according to their de facto practices. In this sub-chapter I first present the studied case and then describe the different data sources of the thesis.

3.2.1 CASE DESCRIPTION

Fida International ("Fida") is a Finnish missions and development cooperation organization founded in 1927 and headquartered in Helsinki, Finland. The organization operates in almost 50 countries and concentrates on the rights of the children and other vulnerable groups. Fida is a Christian organization and works often in collaboration with Pentecostal churches and organizations as well as other non-governmental organizations (NGOs), both religious and non-religious. In countries where this is not possible, Fida also cooperates with governmental organizations. In 2017 Fida had 167 inpatriate workers sent from Finland and its revenues as well as costs were around 18 million euros. 81 % of the revenues was used in operations abroad.

This thesis concentrates on the knowledge flows within the development cooperation function of Fida, and hereafter "Fida" refers to only this function. In 2017 the development cooperation function had 36 employees hired from Finland as well as 310 local employees in 17 countries. Some of the local employees are hired by Fida, some by local liaison offices or partners. The overall expense of Fida's development cooperation activities during 2017 was 6,1 million euros, of which 4,7 million euros was covered by Finnish Ministry of Foreign Affair's (MFA) programme support and 1,37 million euros by self-financing.

Fida's organizational structure is highly dispersed: in every country at the field, there are a few or possibly only one sent employee with a local team of around 10 people. As mentioned, the focus of this thesis is specifically knowledge flows between the countries, i.e. between the sent employees at 17 countries and the unit at the Helsinki office, around 40 people in total. Even though this framing is justifiable – for the viewpoint of this thesis is intra-, not inter-organizational – it is nevertheless somewhat arbitrary, for the 310 local employees are an essential part of the actual operations, and excluding them from the studied breadth reduces the coverage of the results of the thesis. It can be said that the borders of Fida's operational organization are vague and the actual activities extremely networked with local partners, making it difficult to define the borderline between Fida and its partners in terms of knowledge flows. Thus, the findings from the study do not cover all the aspects of Fida's de facto knowledge flows and organizational learning but are more of a glance to some levels of it.

The development cooperation unit at Helsinki office consists of the development cooperation Program Manager and four Specialists, an Assistant and a Communications Officer. The employees at the Helsinki office mainly offer and develop technical expertise to the workers abroad as well as answer for the reporting to and communication with the MFA. In the context of this thesis, 'office' refers to the headquarters in Helsinki, whereas 'field' refers to the other 17 countries. Financial, HR and ICT departments also offer support for development cooperation employees both at the headquarters and abroad; nevertheless, knowledge flows with these departments are mainly framed out from the scope of this thesis.

The field is divided in three regions; Europe, Asia and EAMECA (standing for Eastern Africa, Middle East, Central Asia). At the moment Fida has no development cooperation activities in Europe, so this region is excluded from the discussion in this thesis. Instead, headquarters at Helsinki is discussed as a region of its

own, as its role is quite different from the other areas. The overall development cooperation operations are quite evenly distributed between Asia and EAMECA; there are operations in eight countries in Asia and in nine countries in EAMECA.

Both regions have a Regional Director responsible of all Fida's operations in the area, both development cooperation and missions-related. The regions are further divided into two sub-regions lead by Regional Deputy Directors or Regional Programme Managers, who report to Regional Directors; for the clarity of expression these are in this thesis hereafter referred to as Regional Managers. Each sub-region consists of four or five countries closest to each other. Additionally, both regions have a few Regional Advisors or Specialists, who report either directly to Regional Directors or to Regional Managers. Specialists and Advisors assist the employees in their area in technical and thematic matters, e.g. in gender issues or in questions relating to psychosocial support or climate, and they are hereafter referred shortly as Regional Advisors. Furthermore, the regions also have Financial and Communications Planners supporting the operations.

Fida's main structure is line organization, even though it has also matrix-like characters. Especially the Financial Planners work in a matrix, for they have superiors in the field even though their main department and Finance Manager of Fida are located at the office. The Top Management Team (TMT) of the whole Fida organization consists of Executive Director, Deputy Executive Director, Administrative Director and three Regional Directors, whereas the Regional Management Team (RMT) consists of Executive Director and three Regional Directors. In 2013 Fida implemented a major change in its organizational structure, as more power and management responsibilities were shifted to the field, where the actual operations were run as well; before that all the management responsibilities were at the headquarters. Now the Regional Directors report directly to Executive Director and have the main responsibility and power to organize and make decisions in their own regions.

In all the 17 countries there is one Country Programme Manager responsible of the operations in the country in question, hereafter shortly referred to as a Country Manager. The local offices in each of the countries, furthermore, have up to 10 local employees running the actual operations. Thus, in Fida organization the Country Managers are without managerial responsibilities, but in the local context they may have several subordinates. The organizational chart of those parts of Fida that are relevant in the framing of this thesis, are presented below in Figure 13.

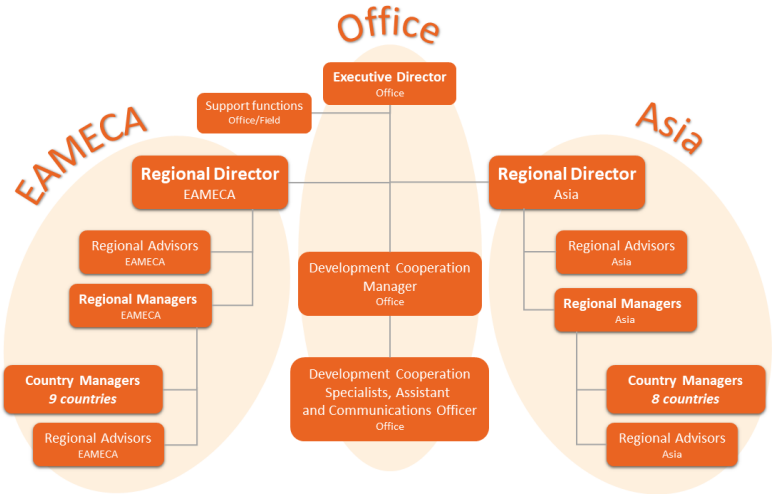

Figure 13. Organizational chart of Fida's development cooperation functions relevant to this thesis

Fida's development cooperation function is a perfect match for studying knowledge flows within knowledge-intensive global organizations, for the function can be described to be an epitome of such an organization: the whole purpose of development cooperation can be said to be knowledge sharing. Even though in the history development cooperation has for a large part offered material resources from the developed countries to the less developed, the present-day development cooperation focuses more on strengthening "developing countries' own resources to allow them to be less dependent on development aid.[1]" This is mainly achieved by training and empowering the local residents themselves to be able to develop their living conditions and advocate their rights. Thus, also one of Fida's main goals is to transfer knowledge, skills and capabilities to the developing countries.[2]

Non-profit or non-governmental organizations (NGO) do have differences when compared to business organizations; it can be said that while for business organizations mission is a means for money, for NGOs money is a means for mission (Hull & Lio, 2006). The main differences between for-profit and non-profit organizations are related to this significance of the mission, to different motivational factors of the employees, and to different challenges in leadership (Allyn, 2011; De Cooman at el., 2011; Kreutzer & Jäger, 2001; De Varo & Brookshire, 2007; Drucker, 1989). It can be argued, however, that in the context studied within this thesis, these factors are not highly influential: the actual *operations* of and *activities* within knowledge-intensive organizations are similar despite of the *objective* they are targeted to. The different motivational factors, however, probably can affect also daily activities of the employees, but as this thesis does not aim to study *people*, but organizational culture, organizational structure and organizational work practices, it is assumed that these factors do not make the processes of knowledge flows and organizational learning significantly different in NGOs than what they are in business organizations.

[1] MFA's web sites describing goals and principles of Finland's development policy, https://um.fi/goals-and-principles-of-finland-s-development-policy [accessed January 14, 2019].
[2] The claims in this paragraph are, in addition to the empirical data of the case, based on MFA's and development cooperation umbrella organization Fingo's definitions of policy found from their web pages, https://um.fi/development-policy-and-development-cooperation and https://www.fingo.fi [accessed January 14, 2019].

3.2.2 SECONDARY DATA

The secondary data (Ghauri & Grønhaug, 2010, p. 97) collected during the thesis process consists of mainly Fida's internal documents, but also of some public sources, such as the web pages of Fida and the organization's financial statement from the year 2017. Furthermore, I familiarized myself with development cooperation related content at the web pages of MFA and the Finnish umbrella organization of development cooperation, Fingo, in order to gain overall understanding of the field and broader context of development cooperation.

To understand the Fida development cooperation organization, organizational structure and official ways of working I studied the internal programs, reports and guidelines. All the documents I received from Fida are listed in Appendix I, but the main sources are the current Programme Plan of Fida development cooperation activities (2018-2021); the Project Manual 2018-2021; the Meta-analysis on Fida development cooperation programme 2014-2017 (evaluation of the programme conducted by an external evaluator); the MFA evaluation of Fida development cooperation and humanitarian assistance from 2017; and the annual reports of development cooperation from 2016 and 2017.

The secondary data were not analyzed systematically, but they were read through to gain and summarize an understanding of the organizational structure, official work practices, and ways of working of the organization, as well as of the broader context of the organization and its operations. Studying them was a necessary preparation for designing and conducting the interviews, for without the insights gained from them I could not have understood the context of the case nor discuss with the interviewees on a meaningful level. Furthermore, they also provided the outline of the organizational structure and official work practices of the organization, described in the results chapter. It can be said that the internal documents formed the skeleton of the findings, whereas the interviews and observation added the "flesh and life" into the body of the findings.

3.2.3 INTERVIEWS

During the thesis process I conducted 15 thematic interviews, one of which was a group interview with two interviewees. 12 interviewees were from the development cooperation function and others from the management: Executive Officer, two Regional Directors and, for background information, the ICT Manager. The summary of the details of all the interviews can be found from Appendix 2.

Thematic interviews are semi-structured; they offer more freedom and flexibility than strictly *structured interviews*, but still concentrate on pre-determined themes unlike totally unstructured or *open interviews* (Ghauri & Grønhaug, 2010, p. 126; Hirsjärvi & Hurme, 2009, p. 47; Hirsjärvi et al., 2007, p.202). Thematic interviews were deemed to be most suitable for studying the research problem of this thesis, as it is multi-faceted and context-dependent, requiring interviewees to describe their own impressions, experiences and interpretations, but still focused around specific themes. The thematic interview type enabled structuring the interviews according to the different aspects of the research problem, while still allowing the discussion to flow freely from one subject to another and asking further questions whenever there was a need for it (Ghauri & Grønhaug, 2010, p. 126; Hirsjärvi & Hurme, 2009, p. 47; Hirsjärvi et al., 2007, p.202).

As mentioned, the themes were chosen according to the research problem. After some basic background questions related to the interviewees' length of career at Fida and daily activities at work, the themes concentrated around the formal and informal channels through which knowledge flows within the organization.

Both of these themes furthermore included discussion about the organizational structure and organizational work practices – both formal and informal – related to knowledge flows. Organizational learning and organizational culture were separate themes that were discussed in more detail at the end of every interview, even though both were discussed also whenever the conversation touched on related aspects. The themes, with some exemplary questions and background information about the thesis, were formed into an interview skeleton which was sent to the interviewees before the interviews, thus allowing them to orient themselves to the interviews.

The first interview was slightly different from the others, for during it I tested and discussed the different themes and subjects with the interviewee who was also the thesis advisor and one of the Specialists of the development cooperation unit at Helsinki office. Thus, the first interview served also as a *pilot interview* (Hirsjärvi & Hurme, 2009, p. 72). Additionally, the interview with the ICT manager followed only loosely the main themes, as the main purpose of that interview was to gain understanding of the IT tools and technologies used at the organization. Furthermore, different themes had different importance at different interviews, depending on the position and background of the interviewees.

The selection of the interviewees was done together with the thesis advisor. The amount of the interviews was first agreed to be around 15 with also the thesis supervisor, and the selection criteria concentrated on the balance between the office and the field and the management and the grassroots, i.e., those employees who have no subordinates within the Fida organization, and who run the actual operations within the countries. Additionally, the length of career at Fida, gender and age were taken into account where possible, but these were deemed to be of less importance. Out of the seven employees of the unit in Helsinki I interviewed four persons, and from the field ten persons; four from EAMECA and six from Asia. Of all the interviewees three were from the top management of the organization, three from the management level (two from the office and one from the field) and the rest without managerial responsibilities (three from the office and seven from the field).

The first interview was conducted in April 2018 and the last in September 2018. The interview lengths spanned from one hour to 2:20 hours, and the average length of an interview was circa 1:45 hours. All the interviews were thematic, and the interviewees had received an interview skeleton beforehand; the skeleton is presented in Appendix III. One of the interviews was a group interview with the two regional directors, and all the others were individual interviews. Three of the interviews were conducted in online meetings via Skype for Business and others face-to-face. All the interviews were conducted in Finnish, and the quotations in this thesis are translated by the author.

The interviews were recorded, transcribed and analyzed with Atlas.ti program following the principles of qualitative analysis and described more below in chapter 3.3. 11 transcriptions were written by professional text processors and 4 by the author. Altogether the interview transcriptions spanned 320 pages of text.

3.2.4 OBSERVATION

During the thesis process I observed orientation days of new employees for two days, during which emphasis was on development cooperation. Additionally, also informal discussions with different Fida employees during coffee breaks or when visiting the office constitute a part of the observation, even though data from these

cannot be analyzed as strictly as the data from other sources. After or during most of these observations I nevertheless took notes, and these were taken into account in the analysis phase of the process.

As Hirsjärvi et al (2007, p. 207, translation by the author) state, observation reveals "whether people act as they claim acting". Ghauri & Grønhaug (2010, p. 115) further note that through observation the researcher can "capture the dynamics of social behaviour in a way that is not possible through questionnaires and interviews." Thus, as mentioned above, observation provided the most unbiased view on those aspects of the case that were unreachable through other methods.

The observed orientation training of new Fida employees took place in August 2018. The participating employees were leaving for the field in the near future and were mainly development cooperation workers. One of the participants was from the financial department and another from the communications department, but they too would work closely in collaboration with development cooperation functions. Two of the participants had already before worked at Fida but had now changed positions and thus benefited from the basic training. The training included subjects such as the project manual, the programme portfolio, the strategy and program of Fida development cooperation, ICT, reporting, monitoring and evaluation. Different subjects were introduced by different members of the Helsinki office's development cooperation team, and all the members of the office team (who were not currently on vacation) attended at least in the beginning to introduce themselves to new employees. The observation was partly *participative* (Ghauri & Grønhaug, 2010, p. 115; Merriam, 2009, p. 124; Hirsjärvi et al., 2007, p. 212) in a sense that I attended the conversations and exercises when the situation allowed it, but the main purpose of my participation was observation, and that was clearly stated at the beginning of the training. During the training days I took detailed notes which were analyzed together with the data gathered from the interviews.

During the thesis process I discussed informally with several Fida employees at the Helsinki office and via email. These conversations were not planned observation as was the attending of the orientation training, but they too provided insight and understanding of the Fida organization, organizational culture, work practices and ways of working. After some of these discussions I took notes which were again analyzed together with the interview data. These observations can thus be defined to be part of the *field study* (Merriam, 2009, p. 117) of the thesis process.

3.3 DATA ANALYSIS

According to Merriam (2009, p. 175), "Data analysis is the process of making sense out of the data", involving "consolidating, reducing, and interpreting" the empirical data. Other authors have mentioned that the purpose of analysis is "to understand and gain insights from the collected data" (Ghauri & Grønhaug 2010, p. 199), and "to create clarity into the data and thus produce new knowledge" (Eskola & Suoranta 2008, p. 137; translation by the author). In this chapter I explain how the empirical data in this thesis has been analyzed and interpreted.

To paraphrase Mäki's (2008, p. 53) remark on knowledge processes, also the subprocesses of qualitative research are difficult to be put into sequential order, as they are "highly interrelated, ill-structured, usually overlapping, and their beginnings and ends are difficult to define accurately." Many authors note that it is not easy to divide a qualitative research process into separate parts, for interpretation is conducted throughout the whole process; the research plan or even research problem might need to be reconsidered at the later stages of

the process; and data collection and analysis are often conducted simultaneously (Ghauri & Grønhaug, 2010, Merriam, 2009, p. 176; p. 197; Eskola & Suoranta, 2008, p. 16; Hirsjärvi et al., 2007, p. 216-218). This thesis process has been no exception: different parts of the process have been interrelated, affecting each other and reconstituted when needed. The literature review has happened in tandem with the data gathering, analysis and writing, and the findings from the first interviews have altered the course of the latter ones. The data analysis as well started from the beginning of the data gathering, and it guided also the theory selection. In the next paragraphs I nevertheless try to describe in sequential order the steps taken in analyzing the research data.

Quite naturally and inevitably I had already before the starting of data gathering an understanding of the studied phenomenon, based on my previous experiences, studies and knowledge of the subject. This pre-understanding already affected the setting of the research objectives and questions as well as the theory selection. Accordingly, the initial analysis of the empirical data – that started the moment first data were gathered – was guided by the theory and knowledge preceding the data. Additionally, all new empirical data were tentatively analyzed, and this analysis affected the gathering of new data: thus e.g. the last interviews could already concentrate more on finding *solutions* to the problems discovered during the earlier interviews, not just describing the status quo. Furthermore, as new insights were found during the analysis, also new theory could be chosen: e.g., findings related to the processes of organizational learning within the case organization guided the selection of relevant theory and made possible the combining of different frameworks related to organizational learning described above in chapter 2.4. Thus, the overall analysis process can be described as *systematic combining*, "a process where theoretical framework, empirical fieldwork, and case analysis evolve simultaneously" (Dubois & Gadde, 2002, p. 554).

As Merriam (2009, p. 169) notes, "Analysis becomes more intensive as the study progresses and once all the data are in." Similarly, the structured analysis of the interviews only started when the first interviews were transcribed, and the transcriptions could be gathered together into the analysis programme Atlas.ti. The first step of the analysis was simply to play with the data, "searching for patterns, insights, or concepts that seem promising." (Yin 2014, p. 135). As I had myself conducted all the interviews and was thus familiar with their contents, I had already formed a tentative understanding of the initial codes and categories to be searched. As Eskola & Suoranta (2008, p. 151) note, the themes of the interviews – and in this case of the whole thesis – are a natural starting point for structuring the data. Thus, after the initial playing with the data I started with the five main themes of the thesis, namely *organizational structure*, *organizational culture*, *organizational work practices*, *knowledge flows* and *organizational learning*. Nevertheless, at the same time I was open for any new ideas and more detailed insights regarding the main themes that seemed to be recurring in the data. The analysis method can thus be described as *theory-guided*, instead of *theory-based* or *data-based* (Tuomi & Sarajärvi, 2018), and the approach of reasoning used in the analysis was *abductive* rather than purely inductive or deductive (Tuomi & Sarajärvi, 2018; Dubois & Gadde, 2002). As Tuomi & Sarajärvi (2018, p. 110) describe, in abductive reasoning "pure" data and ready frameworks alternate in the thinking process of the researcher, and these two are tried to be combined in a meaningful way.

After analyzing the first interviews a few more categories had started to emerge: especially *type of knowledge* and *knowledge processes* were found to be relevant for understanding the overall flowing of knowledge within organizations and thus they were searched for from the rest of the interviews. Additionally, all the found main categories had gathered up to several subcategories that gave more detailed insight into the theme in question.

Nevertheless, throughout the analysis process some of the category names were changed, some dropped as irrelevant for this thesis, while some were still refined and divided into more detailed subcategories. All the transcriptions were gone through several times, to search for the themes found later in the process, to ensure that no insights were missed.

The actual writing of the results of the empirical study also affected the analysis; as Coffey & Atkinson (1996, p. 109) note, "Analytical ideas are developed and tried out in the process of writing and representing." Thus, putting the findings into words many times generated new ideas of what to look for from the data, and the results were re-written several times when new understanding was slowly building up. Finally, all the interviews were gone through once more with the refined categorization, to ensure no relevant data had been dropped during the analysis process.

The main categories and questions related to them are presented below in Table 2.

Table 2. The main categories of data analysis and the questions considered while analyzing each of them

Main category	Questions considered in this category
Knowledge flows	What kind of knowledge flows, formal and informal, there are between different locations? Are they synchronous or asynchronous and face-to-face or technology-mediated? Are there any blocks hindering knowledge from flowing?
Organizational culture	What is the culture like? Is it free or hierarchical, slow to adapt or learning-oriented? How does it affect knowledge flows and organizational learning?
Organizational structure	What is the formal and informal structure of the organization like? What are the levels of hierarchy? Are there a lot of personal relationships meddling, in good and in bad, with the formal structure? How does the structure affect knowledge flows and organizational learning?
Organizational work practices	What are the formal organizational work practices established for knowledge sharing? What are the individualized and institutionalized mechanisms for knowledge sharing? What are the informal practices that employees are by themselves using? How do these practices affect knowledge flows and organizational learning?
Organizational learning	How does the organization try to ensure organization-level learning? Are there any practices set for that? How do organizational culture, organizational structure and organizational work practices affect organizational learning?
Type of knowledge	What type of knowledge is needed, used and shared in each case? How does the type of knowledge affect its flowing?
Knowledge processes	How and from where is knowledge acquired and searched for? How and where is knowledge stored? How and between whom is knowledge shared? How, where and by whom is organizational-level knowledge created?

4 RESULTS

In this chapter I present the findings from the study. As the research problem of this thesis focuses on how organizational culture, organizational structure, and organizational work practices can facilitate organizational learning and knowledge flows within a global, knowledge-intensive organization, the results are presented following these themes. Accordingly, the chapter is organized as follows. First, I describe Fida's organizational structure in the scope relevant to this thesis. Then I explain the organizational work practices and ways of working within the development cooperation department. As technologies play a major role in the everyday practices of a global organization, also the IT systems used for knowledge sharing between the regions are introduced. After that I describe Fida's organizational culture as depicted by the interviewees and observed by me during the thesis process. In sub-chapter 4.4 the knowledge flows within Fida's development cooperation function are depicted, and explained how found organizational structure, organizational work practices and organizational culture affect these flows. Finally, in the last sub-chapter I explain the methods Fida uses for ensuring organizational learning, and the effects the previous aspects have on these.

4.1 ORGANIZATIONAL STRUCTURE IN FIDA

As mentioned, Fida's organizational structure (in the scope of this thesis) is highly dispersed, and it has clearly three separate hubs: the office, Asia and EAMECA. In theory Asia and EAMECA are totally their own responsibility areas, and the office only supports the regions according to their needs. In practice, nevertheless, the office is closest to the main funder, MFA, which gives them such expertise and knowledge that the regions in reality must comply with. As one of the interviewees from the field mentioned:

> *"Power isn't such a simple concept, but rather a complex one. Sometimes the office has the power of expertise even though they don't have the power to make decisions. And that might be a greater power [than the one's who has the formal power]." (Field)*

This unclarity of power relations in some questions was one of the consequences of the above-mentioned organizational change in 2013. Even though almost all the interviewees agreed that the shifting of power to the field was, if not entirely good, at least a necessary change, it was also widely regarded as not yet finished at the operational level. Two of the interviewed field workers mentioned that the shift sometimes seemed to have even slowed down the decision making, as the regional management still did not dare to make decisions before consulting other managers. On the other hand, the interviewed directors mentioned that sometimes they at the management team meetings had wondered why some subjects had been brought up to them in the first place – *"just decide by yourself"*, one interviewee stated. Additionally, the MFA cuttings in development cooperation funding announced in 2015 were also mentioned often as a factor that had hindered the implementation of the changes started in 2013. These cuttings furthermore had caused many other adjustments and cutbacks that were still not thoroughly settled in within the organization.

The formal command line in Fida runs from the Top Management Team (TMT) or Regional Management Team (RMT) to the Regional Managers and from them to the Country Managers, who implement the instructions and run the operations in their own countries, whereas the reporting line runs in the reversed order. The Specialists and Advisors both at the office and in the field support the planning, reporting and implementing of the actual operations in the countries. These lines are described in the organizational chart presented above in Figure 13.

On the practical level there still seemed to be a lot of ambiguity regarding the communication between the office and the field: one of the interviewees noted that when looking from the field, the organizational structure is very clear, but when looking from the office, not so much. For the employees at the office it was not always clear with whom to communicate: Regional Directors, Managers, Advisors or Country Managers, whereas for the management level the structure appeared to be even *"very clear"*. This unclarity below the management level resulted partly from the organizational change started only in the beginning of 2018, when the latest development cooperation program was launched: before the change Regional Managers were responsible of combining the regional reports from all the project reports from different countries, and it was natural and easy for the office to mainly communicate with them and the Regional Advisors. Now, from the beginning of 2018, the Country Managers combine the project reports from their own countries, and they need to communicate much more with the office than earlier. During the time of the first interviews, official guidelines for the communication in this new situation were not yet formed, resulting in some uncertainty and frustration in the situation. Nevertheless, also the interviewees who mentioned the problems regarded the situation as something that just needs to be discussed and agreed on in the new situation, not as a nuisance lasting 'till unforeseen future.

In addition to the novel and presumably momentary problems due to the mentioned recent organizational changes, there were also other, more deeply-rooted challenges caused by the dispersed nature of the organization. The mere distance between the office and the field as well as the many different aspects of operations in Fida inevitably cause misunderstandings, redundancy of communication, and increased need for coordination. One of the employees at the office mentioned that *"there's sometimes some gap in what knowledge we need, and what they think we need",* whereas one field worker noted somehow frustratedly that many different employees from the office might ask the same things, just from different viewpoints, causing futile extra work at the field. Furthermore, several employees noted that the new knowledge related to MFA and its requirements gained at the office was not easy to transfer to the field, and that there even were not any planned channels for it.

> *"Maybe one of the challenges we have is that we don't have any such forum where all the Finnish employees, regardless of the region, would get the same information." (Office)*

Thus far in Fida, the only official links between Asia and EAMECA have been the managerial meetings where the Regional Directors and Managers have shared their thoughts, but no other channels for knowledge sharing between these regions have been established. While most of the interviewees at the operational level described there to be a gap between the office and the field, the division between Asia and EAMECA was described to be even larger, *"a crack between the tectonic plates"*, as one of the field workers depicted it. This is clearly a major hindrance blocking knowledge flows within Fida, and one of which the organization is very aware of. Fida has, over a longer period of time, planned to start new global teams centered around its different knowledge areas, to enable knowledge sharing and mutual learning between different countries and regions. At the moment of writing the thesis the implementation of these teams was just starting: there are planned to be six global teams, which have members from both Asia and EAMECA and some also from the Helsinki office. There are general instructions of the purpose and idea of the teams, but they set their own more detailed targets and agree by themselves on working practices and communication patterns. At the moment there is planned to be no specific budget for the teams, and they will probably meet mostly online, not face to face.

The members of the teams nevertheless mainly know each other already beforehand, so it is supposed that the relationships already exist, instead of them only starting to be built.

In addition to the formal structure there of course is an informal one in Fida as well as in every organization. Quite many of the employees have worked for Fida for many years, during which many connections and friendships have been formed. Many of the office workers had previously been working at the field as well, and these connections were often mentioned as being an alternative channel between the office and the field. The informal connections between the different regions at the field were rarer, but there was a clear emphasis on strengthening these too: in addition to the above-mentioned global teams also the newly-appointed Regional Director for the EAMECA region was previously a Regional Manager at Asia, and the benefits this link offers are consciously nurtured. One of the interviewees phrased beautifully the value of personal relationships: *"I'm very glad we've got this personal friendship with [another employee] and there's a lot of mutual learning happening between us, that wouldn't necessarily happen if this friendship didn't exist."*

Even though the benefits of personal relationships were acknowledged and made good use of, the possible downsides were recognized as well. Several risks of bypassing the planned structure in communication were referred to: e.g. stepping on other's toes; making decisions without proper authorization; forgetting the storing and codification of the discussions and decisions; and dropping out of the knowledge flow people who should have gotten the same knowledge were mentioned as the drawbacks of using informal structure instead of the formal one. Furthermore, it was noted that new employees could get contradicting instructions from the orientation conducted at the office on the one hand and when arriving at the field on the other: it was mentioned that the new employees learned the formal practices and instructions at the office before leaving Helsinki, but when they arrived at field the old employees might instruct them to follow the de facto practices followed at the area in question.

On a general level it seems that the official hierarchy and titles are not greatly valued in Fida, but the employees are more concentrated on just getting the work done. *"I want, for my own part, to do that which makes me most useful, whatever that is in every situation"*, as one interviewee put it. Even though the organization is quite small, many seemed to not know other parts of the structure than the one closest to them, and even though the employees knew their own status in the official hierarchy, the titles and ranks were mainly not thought of or cared for so much. The indifference towards titles might, however, result from two other factors as well: the change in the program in the beginning of 2018 changed also some employees' titles and they might not yet have learned the new ones, and some employees might use different, more suitable titles in their daily work in the local context. These aspects might have obscured the official structure in the minds of some of the employees.

4.2 ORGANIZATIONAL WORK PRACTICES IN FIDA

This chapter introduces the identified organizational work practices most related to knowledge flows between the different locations of Fida's development cooperation function. However, the question of how these practices actually work and how does knowledge flow within the organization are discussed in more detail below in chapter 4.4.

Fida's development cooperation operations follow a four-year project cycle, as the MFA funding is granted for four years at a time. Additionally, as Fida needs to be able to demonstrate clearly the impact of their

operations as well as the consumption of their funds, the planning and reporting practices are quite formalized and heavy. Thus, Fida has for their formal processes strict guidelines and huge amounts of codified knowledge: e.g. the current Project Manual – a manual gathering together all the official ways of working regarding development cooperation and humanitarian aid projects – is 57 pages long and has 63 appendices, and during a four-year country programme, there might be easily over 100 or even hundreds of official documents and reports to be written at every country. Understandably, it is not possible nor worthwhile to describe here all the practices related to development cooperation, but only the few most relevant ones from the viewpoint of knowledge flows between different locations are discussed in this thesis. To balance the heavy codification, the organization has a strong objective also to personalize their practices by e.g. organizing both face-to-face and online meetings as much as possible. Followingly, in this chapter I will first outline the main practices aiming at sharing codified knowledge, such as official documents and reports; then describe the IT systems used in Fida for knowledge sharing and storing; and finally describe the main channels for sharing tacit knowledge, such as collocated and online meetings.

4.2.1 PRACTICES FOR SHARING CODIFIED KNOWLEDGE

The body of Fida's reporting practices are the triannual reports compiled in every country and approved by Regional Managers and Regional Directors. These reports are cumulative, and the third triannual report is at the same time an annual report. These annual reports are compiled at the office together into one coherent annual report of all Fida's development cooperation operations to be sent also to MFA. These reports are meant to be a tool to be actively used and utilized in daily operations of the countries – and they were described to be the *"skeleton"* and *"backbone"* of the operations at the field, and a *"very important tool for the regional management"* – but there could be noticed some frustration towards the heavy reporting duties in some of the interviewees.

> *"Here in the office, those reports --- are awfully important. At the field we do the actual work, the reason why all those exist. They don't feel as important as the actual work." (Field)*

Fida has tried to lighten the reporting system, but due to external funding from MFA and the need to clearly illustrate the impact of the operations it cannot be considerably lessened. Thus, the contradiction between doing and reporting will probably continue, and there will be continuous balancing between the different needs of the field and the office. The organization has also investigated the possibility to build or purchase an IT-based reporting system to ease the practical aspects or reporting – which is now done mainly with Word and Excel documents – but the costs would have been so high that this idea had to be abandoned, at least for the time being.

In addition to the triannual and annual reports Fida also monitors the impact of its projects continually, and monitoring and the indicators developed for that purpose form a substantial part of Fida's codified practices. Nevertheless, as they do not play a major part in terms of knowledge flows between the different locations, they will not be discussed further in this thesis.

Another major codification practice used in Fida and relevant in the scope of this thesis are the evaluations of the country programmes and other implemented projects. The country programmes and their individual projects are continually evaluated and monitored internally, but in addition to the internal processes every

country programme is evaluated at least once in every programme period by an external evaluator. The evaluation reports produced from these processes are an essential source of codified knowledge within Fida's development cooperation function, and they will be discussed more below in chapter 4.5 in relation to organizational learning within Fida.

Finally, and as mentioned, Fida has strict guidelines to be followed in the daily operations, and the number of steps to be taken and methods to be used is substantial. All these required steps, methods and practices are summarized in the Project Manual, which itself is a major source of codified knowledge that is expected to be utilized and followed at the field. Furthermore, the Programme Plan for the current period is as well a document full of encoded knowledge that is supposed to be known and followed at the field as well.

4.2.2 IT SYSTEMS FOR KNOWLEDGE SHARING AND STORING

Fida uses Microsoft's Office 365 (O365) for the basic knowledge sharing and storing purposes. O365 includes a wide variety of applications for different purposes, e.g. *Outlook* for emails, *Skype for Business* for online meetings and chatting, *SharePoint* for intranet and *OneDrive* for storing documents. In addition to these more traditional tools Fida has recently started using the newest addition of the O365 selection, *Teams*. A detailed discussion of the characteristics of these different applications is outside the scope of this thesis, but as they considerably affect the ways of working at Fida their usage will be described in a somewhat deeper level. Nevertheless, the basic idea of emails, online meetings, file storing, and intranets are presumed to be familiar to the reader. As Teams is quite a fresh product – launched by Microsoft in early 2017 – it will next be described in a few sentences in the next paragraph; even more so, as it is currently changing the daily practices in Fida as well.

Teams is a comprehensive tool for team collaboration: it enables inter alia private chatting, group discussions, online meetings and sharing and co-editing documents online – it is a team communication platform (TCP) described above in chapter 2.3.4 in relation to technology as a knowledge enabler. Teams can also function as an interface to shared knowledge storages, as it is synchronized with SharePoint folders. Microsoft calls it "the hub of teamwork"[3] and aims to replace Skype for Business with Teams in the near future.

IT for knowledge storing

Fida has built its intranet on SharePoint, and aimed at storing the different reports, instructions and documents from different regions in its folders. Until recently, the official instructions for the different countries was to upload e.g. all the triannual reports into SharePoint, where the employees at the office would have access to them, to combine the annual reports from different areas. Nevertheless, for development cooperation employees, SharePoint never really took off.

> *"We had representatives from every region and we together decided to move the whole [reporting] system to SharePoint, and to start to take this through and, well, it didn't go through." (Office)*

It was widely described that SharePoint was *"dysfunctional and fuzzy"*, difficult to use, its structure didn't facilitate the actual needs of the development cooperation employees, and especially at the field it was often

[3] Microsoft home page for Teams, https://products.office.com/en-us/microsoft-teams/group-chat-software [accessed November 28, 2018]

extremely slow due to unstable internet connection. Typical comments on SharePoint from different interviewees are presented in Table 3 below. It was also mentioned that if one does not know how the needed documents were named it was very difficult to find them, and that the folders were named according to project codes which were not familiar to most of the employees, hampering the usage of the storage. As a typical illustration of the difficulty of using the system, some of the interviewees mentioned that even when the official instruction at the field was to upload all the reports into SharePoint, the office had still requested them *additionally* to be sent via email to the office – because email just was so much easier a place to download them for further use. On the other hand, several of the interviewees from the field mentioned that SharePoint is not so difficult to use in reality, but as the field workers are always so busy, they don't prioritize taking time to learn the logic of the interface.

Table 3. SharePoint usage in Fida

Quotations from the interviews
I've sometimes tried to find something from there, but it's not an easy channel. One would rather ask somebody if they'd know who could [help in this]. *(Field)*
I go so rarely to our SharePoint - I've never learned to use it, but I hear that's where our knowledge is. *(Office)*
In SharePoint, after the front page where are all the announcements and stuff, you find that but after that everything's just suffering. *(Office)*
At the field, some employees use [SharePoint] and some don't, and if I should find some specific report and I click through the long path through different folders, and then the report isn't there, it's frustrating. That's why I don't use it. *(Office)*
If I know I want some [knowledge] then I can get there, but I'd have to make it my business to start digging. It's good that the knowledge is somewhere, but it's not used so extremely lot, not so that I would every day start combing [it up]. *(Field)*
If I have to find some knowledge I go there --- but it's more like a database, there are documents and stuff. --- It's maybe one reason why I haven't used it so much, it feels that one doesn't find [things from there]. *(Field)*
And yes, it is very extensive, but one can't find anything from there. *(Field)*
[When launching SharePoint] we thought this would remove the need to send emails, that people would go there to read, but it just doesn't work so simply. *(Office)*
[SharePoint] is so dysfunctional and fuzzy --- that I don't know where I can find [the knowledge] but in principle there it is. --- and then if one's question is answered by 'look from [SharePoint]' that is --- waste of time, because one doesn't necessarily understand the context. *(Field)*

In addition to SharePoint, the office employees use a shared disk where all Fida's archives are kept in permanent storage – the *"finalfinal storage"* or *"graveyard"*, as some of the interviewees called it. As the focus of this thesis are nevertheless the knowledge flows between different locations, this will not be discussed further in this thesis. Similarly, SharePoint was the place where also instructions related to e.g. employment, daily allowances and occupational health care were checked when needed, but as these are not related to the global knowledge flows, they are not discussed further.

Due to the difficulties encountered in using SharePoint Fida has shifted towards using Teams as the tool for storing and sharing codified knowledge. The current guidelines, valid for the period 2018-21, instruct the employees to store e.g. reports from the different countries into Teams, where they can also be edited collaboratively. Nevertheless, as not everyone is yet using Teams, there is quite much ambiguity and variance in how things are actually stored and shared: some use Teams, some SharePoint and some email.

"As we have quite many channels, one almost has to know what the fastest channel is to connect to everyone, who uses what tools the most." (Office)

Generally, everyone seemed to agree on that Teams is the tool towards which all Fida is going, but at the moment the organization is under a transition period when the new tool has not yet totally settled in. This shift is discussed more in detail below.

In addition to the official IT tools for knowledge storing, many field workers have started to use also shared folders in *Dropbox* or *Google Docs* for sharing documents with the local employees and partners. At the moment there is no easy access to the official tools for those stakeholders who do not have an account for Fida's internal network, which has necessitated finding alternative channels for collaboration. Using of Dropbox or similar shared folders nevertheless is not authorized by the Fida IT guidelines, and the IT department would rather want the field to use Microsoft's OneDrive for sharing folders outside of Fida's network. The interviewed field workers however found the usage of Dropbox highly convenient, and this also seemed to be a matter of some contradiction within the organization.

IT for knowledge sharing

The most used IT tool for communication and knowledge sharing in Fida is email: all the interviewees mentioned that as the main communication medium, even though many had started to use more and more also Teams and WhatsApp. Typically to knowledge-intensive work, also Fida employees use often a major part of their days reading and writing emails, even though especially at the field e.g. field trips to target sites interrupt this daily routine. The organization has also purposefully tried to shift at least some of the email traffic into more suitable media, such as SharePoint, Teams and Skype for Business.

As mentioned above, the reports and other official documents at Fida are mainly co-edited Word and Excel documents that had long been sent back and forth via email, resulting in different employees working on different versions and confusion on which one of them is the most recent one. Earlier SharePoint had been introduced as a solution for this hardship but, as discussed above, it did not meet the expectations set on it. Now Teams has been introduced as a new solution, and it seems to have succeeded in reducing the general hassle related to transferring reports, as well as decreasing the amount of emails. Nevertheless, the transition towards Teams is still ongoing, and not everyone is yet using it: the Helsinki office has been the first adopter of the application, and after trials with test groups from the field it has just recently been chosen as the official way of sharing the reports from the field, as well as discussion regarding them. The interviewed office employees had also started to use Teams for even most of internal communication, but at the field email seemed still to be the main medium for also communication between Fida employees. Email nevertheless was mainly used for e.g. communication that requires longer messages, records of what is said, or informing larger group of people at the same time. As one of the interviewees mentioned, *"If there's some question in mind and one doesn't need the answer necessarily right away, and there's no need to explain and open up the subject so much, then [email] is quite handy."*

The tools used for more ad-hoc communication and shorter notes in Fida are Teams, Skype for Business and WhatsApp, in addition to email being used for this purpose as well, and SMS messages and traditional phone still holding on in some situations. Skype for Business messages appeared to be mainly used to ask if an ad-hoc online call or meeting would be possible, whereas Teams and WhatsApp were used more for chatting and

short messages. Even though according to one interviewee, *"it seems that sometimes WhatsApp is the most used communication tool"*, it still is not approved of by the IT protocols of Fida. Nevertheless, for most of the time it seems that the convenience of using WhatsApp – and in some countries other instant messaging applications widely used in that national culture as well – overweighs the concerns over IT security. Microsoft hopes that in the future Teams will be the solution for short messages and ad-hoc online calls, but time will tell whether it will be easy-to-use enough to attract the business users at Fida as well as in other organizations.

The most used IT tools for knowledge sharing and storing in Fida discussed above are aggregated together in Figure 14 below. The figure is loosely based on a picture one interviewee drew while discussing the different tools in use at Fida.

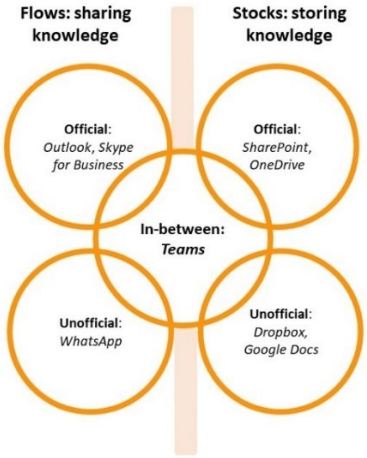

Figure 14. The most used IT tools in Fida for knowledge sharing and storing

4.2.3 PRACTICES FOR SHARING TACIT KNOWLEDGE

Even though Fida has – for the necessity deriving also from the outside factors such as dispersed structure and MFA funding – very heavy emphasis on codified practices, the organization and all its members clearly understand the value of personalizing the working practices and the significance of synchronous communication and trust in relationships. One of the interviewees from the management, right in the beginning of the interview, summarized their understanding of the overall subject: *"This knowledge transfer, it happens through the people."* There is a great number of both collocated and online meetings, and the significance of face-to-face or at least synchronous collaboration was agreed on quite unanimously. As one of the interviewees mentioned, the reports as such are not enough to reveal the wholeness and the context to an outside reader, even though they describe in a broad picture what has been done in the program.

> *"The structure of the reports isn't necessarily such that one could really get the whole story out of them. It's more from the [Country Managers], if one would interview them and discuss, then one would better hear what has it been, than from such [reports]. (Field)*

The typical quotations from the interviews regarding face-to-face and synchronous communication are listed below in Table 4, and the main meetings facilitating knowledge sharing between different areas are described next.

Table 4. Quotations regarding the significance of face-to-face communication

Quotations from the interviews
At least I feel that it's so much easier when you see the other and you're together, the conversation somehow flows in a different way --- it's not bounded to 'ok we've got these two hours here, so what do we have to discuss here' -- so it's a totally different thing then. *(Field)*
So, with people you see more often you share knowledge more often. That's why I see it's so important to have these regional trainings and other meetings, so that we can communicate somehow more unimpeded. *(Field)*
Face-to-face was almost the most efficient way to get answers and communicate with [the supervisors]. *(Field)*
Maybe I'd call them and then ask directly and discuss, for one can't express the idea so clearly in an email as when discussing. *(Field)*
And it's so easy now when you walk [into the office] you right away see who's there, and if there's something one just can go and say it, for I usually like to go and say things. (*Office)*
There wasn't so much shared sphere, as we didn't have a shared office where we'd see each other. *(Field)*
I think these [face-to-face meetings] are an infinite plus. I think it should be tried to be arranged that people see each other too. *(Field)*
Again we come to the significance of face-to-face meetings and being present. *(Field)*
If we knew each other as persons, then communication would be easy with only email and WhatsApp and whatever. *(Field)*
So that if at some area in some country they've learned to do some things well, it makes no sense that somewhere else they're beating their heads against a stone wall and trying to reinvent the wheel, but then we'll go see and learn. And at least I think that when you yourself see something, or at least it works for me, then you can somehow piece it together and believe and take in much better than if you'd only read it. *(Field)*
I think we should have more - or more is a wrong word because I suppose we don't have at all - but we should have these meetings were people from the same level would come together to share experiences. *(Field)*
[Meeting office people face-to-face] easens communication veryvery much. *(Field)*
At least one event where we'd learn to know each other, then after that it would be so much more natural to somehow continue the communication. *(Field)*
The possibilities to get the same knowledge to everyone, like face-to-face, they're really rare at the field. *(Field)*
We're gathering all the Country Managers together to ponder this, not only accumulating codified knowledge, but this sharing experiences face to face. *(Field)*

The main channels for sharing especially tacit knowledge between different areas are the *Fida days* arranged once a year, and *regional training workshops* once or twice a year. These are nevertheless arranged separately in Asia and EAMECA, and even when they offer great opportunities for knowledge sharing between employees within one region, they do not facilitate knowledge flows between different regions. Furthermore, the workshops were sometimes arranged for smaller sub-regions as well, instead of the whole Asia or EAMECA; this might facilitate discussion and learning within the area in question, but again not help the knowledge flows between the whole organization.

Fida days are an event gathering together all the Fida employees in a certain region and lasting for several days. They are mainly recreational events aiming at building community spirit, enhancing work well-being and sharing experiences, even though they include some trainings and official information as well. The regional

workshops are training events only for development cooperation workers, both from Fida and from partner organizations. They consist of trainings and workshops concerning specific topics related to development cooperation, and often also the Specialists from the office train the regional employees on subjects from their field of expertise. Both of these events – Fida days and regional training workshops – were highly appreciated by all the interviewees.

In addition to the above-mentioned collocated meetings, the regions also have *monthly Skype-meetings* aimed both at building relationships and sharing experiences, as well as informing all the employees about the current issues at the same time. These meetings are arranged in the sub-regions managed by Regional Managers, and they, too, are highly valued by the field workers: one of the managers described them as *"the lifeline"* of getting knowledge from the top to the grassroots. However, in Asia these Skype-meetings have been running for several years, whereas in EAMECA they are just recently being initiated. The management level, including development cooperation managers and directors both from the office and field, meets also at least online more often than the employees from the grassroots; additionally, now when all the Fida managers have been studying a special professional degree in management (JET degree), they have been meeting even face-to-face as much as several times a year. The TMT meets around once a month, but the Regional Directors attend mainly via Skype.

There are of course several meetings also at the main and the local offices, but as they do not so much affect knowledge flows between different areas, they are not discussed here. Nevertheless, at Helsinki office there is a weekly Monday meeting (Maanantaimukavat) for the whole office, where different departments give brief presentations about their situation, to help everyone understand the broader picture of where the organization is at the moment. One of the field employees wistfully mentioned, that *"at the office they have weekly Monday meetings, but at the field we have nothing of the sort"*. Furthermore, it must be noted as a typical example of how Fida has understood the importance of building relationships, that the Helsinki office's coffee breaks are always at the same time for the whole office, encouraging communication and knowledge sharing between people from different departments and functions.

As mentioned above, all the Fida country programmes are evaluated at least once per program period by an external evaluator. The evaluator writes a report of their findings, thus codifying found new knowledge, but after the report is finalized, Fida also arranges an online event where the evaluator presents their findings to a large group of Fida employees. Furthermore, for the current program period Fida has also initiated a new method called *sharing and learning*, *"to enhance learning between various regions"* as the current programme states, where Executive Director, Regional Directors, Regional Managers and the development cooperation team from the office meet online to discuss the findings and learnings from the evaluation, hopefully finding ways to improve operations at also other countries than the one just evaluated. At the time of writing this thesis, no sharing and learning events had yet been conducted. As mentioned, the evaluations and their follow-ups are discussed more below in chapter 4.5 in relation to organizational learning in Fida.

The subtle balancing between codified and tacit knowledge was evident in the empirical data: on the one hand knowledge doesn't move forward to new employees *"via folk memory"* as one of the interviewees mentioned, but documenting is a requisite for ensuring knowledge is preserved and transferred especially to new employees. On the other hand, several employees emphasized the need for mentoring, job shadowing and dialogues with other employees as necessary methods for sharing knowledge both to new employees and

between employees at different regions. The interviewees mentioned several examples of how mentoring and job shadowing had or had not been implemented as a way to orientate a new employee – either new to whole Fida, or new to a certain position – to their tasks, and regarded mentoring as something highly valuable and something to be strived for in order for the new employees truly internalize the tacit dimensions of their work. Furthermore, for the new programme period Fida aims to ensure every new employee will have a mentor with whom to discuss the challenges and other aspects encountered in the job.

Even though Fida has clearly defined processes and practices for many of its operations, several of the interviewees mentioned that they may not be or are not always followed through. As one of the interviewees phrased it, *"I'd say there are some regional differences in the actual practices there [in the field]. For sure the guidelines come from the main office but how are they really fulfilled."* The suspicions about fulfilment of guidelines mentioned by different interviewees concerned e.g. the post-evaluation meetings and follow-up, new instructions from the office in general, as well as the official IT guidelines. As all the Fida employees are working value-based, especially the ones with a long history at Fida might have strong opinions about what is the "best way" to do things. This, among other aspects of Fida's culture, is discussed next.

4.3 ORGANIZATIONAL CULTURE IN FIDA

Most of the interviewees described Fida's organizational culture to be open, safe and flat, and in general everyone was very content working at Fida. One of the interviewees even noted that *"if there wasn't such an organizational culture as we have at least I wouldn't be working here, my goodness!"* The value-based approach and Christian basis of the organization were quite unanimously acknowledged as a significant factor in the creation of the organizational culture, and many of the interviewees spontaneously used the term vocation to describe their approach to the work. Additionally, even when not explicitly asked, several of the interviewees specifically mentioned that money is not an affecting factor explaining their working motivation, rather that the salary at other workplaces would probably be higher, but they want to work at Fida for different reasons.

> *"What is hugely significant is that there's extremely motivated people working at Fida, who work at Fida exactly because they want to work at Fida. They want to work for the goals of Fida and they want their work to have some significance." (Field)*

A few of the interviewees mentioned that especially previously, but maybe still to some extent there might appear to be some nepotism or favoritism, and that – as described above regarding the organizational structure – the informal relationships could result into cliques and affect also in the negative way trust and the movement of knowledge within the organization. Nevertheless, also these interviewees were in general happy with the working environment, and the atmosphere was described to having been improving in the recent years.

Similarly to the above discussion regarding structure, it was also mentioned a few times that individual persons might have an even too great an impact on the atmosphere in Fida. One of the interviewees mentioned that Fida's culture *"is made up of us people. I think in Fida there's this, one's personality affects awfully lot. I don't know if it should."* Another also commented that the *social* culture is nice and unreserved, but the *working* culture depends on the closest coworkers, and it might vary a lot between different areas. For this interviewee the working culture in Fida manifested itself as *"unstructured, dispersed, without systems in a bad way"*, but, as they also mentioned, this was affected by the great amount of recent organizational changes. Again, even

the interviewees expressing critique towards some aspects of the current culture were confident or at least hopeful that the problems can and will be overcome.

The difference between the two regions was also mentioned by some interviewees: *"sometimes it feels like it's two different organizations"*, one of the interviewees noted. The differences appeared to be focused on whether team or individual working was taken as the obvious choice: in Asia e.g., the monthly Skype meetings – which encouraged contact, relations and connection between employees in different countries as well, not only within the individual countries – had been ongoing for several years, whereas in EAMECA these had only been initiated, and some employees might had been accustomed to working independently in their own areas. The need for independence, though, was brought up in a more negative light as well by one of the field workers: *"You have to be very self-managed, entrepreneurial, independent, willing to find out yourself and be explorative to get the knowledge."* Other comments from the interviewees regarding Fida's organizational culture are aggregated together in Table 5 below.

Table 5. Quotations regarding organizational culture in Fida

Quotations from the interviews
Well I think [our culture] is like not too hierarchical. In the practical level it feels like we're more like a family than like it would be very hierarchical. --- Things can be discussed but of course there are certain practices that we follow. *(Field)*
Unstructured, dispersed, without systems in a bad way, so that it would support the fluency of working. *(Field)*
Our operational culture is very free, but of course there is this hierarchy in e.g. how the papers flow and decisions are made - the structure is there. But we can very freely go and talk and share ideas. *(Field)*
I think [Fida] is quite free, that we are not controlled. And everyone in principle knows their job description and responsibilities. *(Office)*
I've got the feeling that none of us is here for thirst for power or looking for position --- but we're rather serving and together building a better Fida and thus helping globally in those sectors and countries where we are, working together as a team --- I'd say that our culture of openness and working together is quite strong. *(Field)*
I don't think there's a fear of making mistakes, because that would paralyze all doing. I think such an organization where one can't make mistakes is a lousy one. So that a mistake is not a negative thing but it's like, that ok we're doing, we're trying, and this just didn't work out perfectly now. *(Field)*
I think now when we've grown it's become too stiff that who gets to talk to whom. Sometimes it feels like that. --- This free communication we share with colleagues, I think it should [be] according to the structure. There you can more freely work and develop it, but it can't be against [the structure], something totally different. *(Field)*
Fida's culture maybe, it is made up of us people. I think in Fida there's this, one's personality affects awfully lot. I don't know if it should. *(Field)*
Maybe the values are such that people here are quite strongly committed to. *(Field)*
I'd say that this is a psychologically safe environment --- from the safest end of the scale that human workplaces and environments can be. But people are people, also at Fida. *(Field)*
No one is really *just* working here. *(Office)*
It's good for people to be working here and people truly care about each other, and everyone has this same goal we're reaching to. Of course, we're always fallible and don't always know how to support each other the way we should, but I think there's a genuine will for that and there's no back-stabbing [at Fida]. *(Field)*
Organizational culture, I think it's a great strength of Fida. I mean if there wasn't such an organizational culture as we have at least I wouldn't be working here, my goodness! *(Field)*

Despite the expressed concerns, the organizational culture was mainly described as a strength of Fida. From the point of view of knowledge flows, the interviewees mainly said that they *could* approach anyone asking for help, if they just knew who could help in what questions, but in practice many from especially the grassroots mentioned that writing to people whom they did not know beforehand was quite burdensome, and they would rather ask from someone they already knew. One of the field workers, though first stating that they knew some people from the office so they could easily approach them, later however mentioned that it is so much easier just to ask the person sitting in the same office than writing emails that *"thus far I haven't had the need to start asking from the office"*.

Finally, the strongly positive orientation towards continuous learning and high-quality work within Fida was clear in the empirical data. Almost all the interviewees mentioned at least in passing their will to excel in their work duties, to make real impact in the lives of the people in the countries where they worked, and to constantly learn and develop their personal skills and Fida's operations. Furthermore, several of the interviewees mentioned having studied or being at the moment studying even several degrees on the side of working at Fida, and the organization was described as being supportive, flexible and providing possibilities and leaves for the studies. Additionally, some interviewees mentioned that they were encouraged to take courses arranged by e.g. development cooperation umbrella organizations, and study related subjects whenever time allowed. Finally, the fact that Fida has decided to have all its supervisors to study a degree on management further describes the organizational emphasis and appreciation towards personal learning and growth, and the objective that it will result into the learning and development of the whole organization as well.

4.4 KNOWLEDGE FLOWS IN FIDA

The above-described organizational structure and practices of Fida largely determine also the *formal* knowledge flows within the organization: the official reporting and communication follow the organizational structure in the order set by the practices. The Country Managers communicate within the field – in addition to their own, local colleagues – mainly with their supervisors, and only to minor extent with Advisors at the field, Specialists at the office or with each other. The supervisors, both Managers and Directors, communicate more with everyone, both from their own regions, different regions, and the office, whereas the office employees communicate mainly with the managerial level of the field, even though lately it has been initiated that the office Specialists would mainly communicate with the Country Managers and only have the regional management at the information loop, e.g. as cc in the emails. The Managers and Directors thus form alone the intersection of vertical and horizontal communication lines, often making them the bottle-necks of knowledge flows – *"not a very pleasant place to be"*, as one of the managers from the field described the situation. At the *informal* level, different employees have formed a network of relationships based on friendships and social relations, where knowledge flows freely but serendipitously. The dispersed structure of Fida, described already above, is a fundamental factor of the organization, affecting knowledge flows between the different areas in every aspect. A simplification of the formal channels or *canals* of knowledge flows within Fida are depicted Figure 15 below.

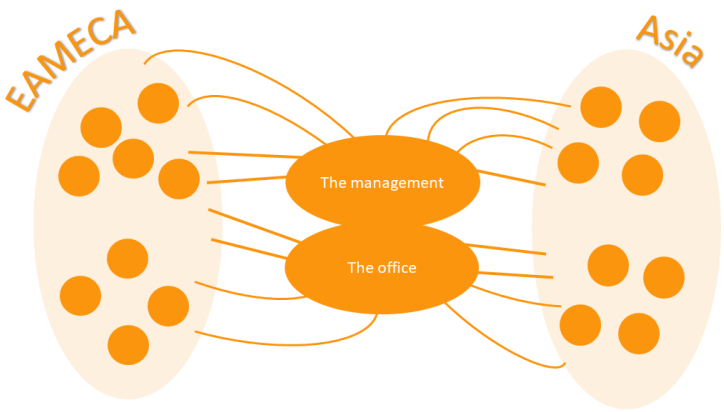

Figure 15. Formal canals of knowledge flows within Fida

One of the interviewees from the management described there to be three dimensions of communication within the organization: communication related to the *reporting process*; communication related to the *learning environment* such as the evaluations; and *operational management and communication* related to the daily conducting of the work. They further emphasized the need to distinguish between these in order to communicate clearly and make sure right kind of knowledge is distributed in each dimension. Especially they emphasized the need to recognize the difference between *decision-making process* and *general knowledge sharing* – they hoped that on a general level knowledge would be shared freely between everyone, but everyone should also recognize when there is a need for decision-making, and who has the official authority for making that decision. As the emphasis on this thesis is on organizational learning and knowledge sharing, i.e. communication, *between* different countries, the last of these different communication dimensions, namely the operational one, is not discussed here in detail as it is more related to the vertical communication between supervisors and subordinates. Communication related to the reporting process happens mostly vertically within the regions and between the Helsinki office and the field, whereas communication related to organizational learning is hoped to be distributed in and between all the different countries, regions and levels but, as described above, this aim has not yet been reached.

As explained earlier, this thesis studies especially knowledge flows between 18 locations: the Fida headquarters in Helsinki and the 17 countries where Fida has development cooperation projects ongoing. There is a clear distinction in the *type of knowledge* flowing between the Helsinki office and the field on one hand, and between different regions and countries in the field on the other. Accordingly, these two different cases are discussed separately. Additionally, the need for richer, contextual knowledge could be clearly seen in the empirical data, and that, too, will be discussed below in chapter 4.4.3.

4.4.1 VERTICAL KNOWLEDGE FLOWS BETWEEN THE OFFICE AND THE FIELD

As Helsinki office is responsible of compiling the overall reports and plans of Fida operations all over the world, they mainly require explicit, *encoded* knowledge from the field: documents, tables and figures in a strictly specified form. In theory sharing this kind of simple knowledge should be easy and straightforward, but practice has proven otherwise: *"this is the issue where we have awfully lot of hassle all the time"*, as one of the office employees described it.

One of the main problems is related to the three different actors involved: Country Managers at the field are responsible of the actual compiling of the reports from the country in question, but the reports need to be approved by the Regional Managers and Directors before being accepted at the office. Thus, it might be that even simple questions related to the tiny details of the report circulate through the whole hierarchy, instead of being agreed on between the Country Manager and the Specialist at the office and only after that being approved by the supervisors at the field. This problem was recognized in the organization, and it was tried to be shifted towards the Specialists from the office communicating directly with the Country Managers, and e.g. the related emails only being sent in cc to the Regional Managers or Directors, for them to being aware of the issue.

IT tools used for sharing knowledge within Fida formed a second challenge for smooth knowledge flows: as described above, the features of especially SharePoint hampered the process considerably, and resulted into various methods of sending the reports and their drafts back and forth. One of the field employees emphasized, quite frustratedly, that the current systems of reporting in Word and Excel documents and storing them in different repositories is not really *reporting*, but rather *archiving documents*. The need for better IT tool for reporting was, as well, recognized, but as described above, its purchasing was at least not yet possible due to financial reasons. Teams was, nevertheless, assessed as being an improvement in this sense – even though only *"if you have to choose between two really poor"* options, as one of the field workers pointed out.

Third problem blocking encoded knowledge from flowing between the office and the field is related to the *tacit* aspect needed in order to understand the explicit, written knowledge: it was evident from the interviews that there was to some extent a clear lack of *shared understanding* and *common ground* between these two areas. Both the office and the field employees mentioned that the other party does not fully understand the context at the other end. Office employees tended to emphasize the need to meet the requirements set by the MFA and follow the official guidelines, whereas field workers noted that office employees do not understand the local context, the time it takes to gather the required details, and the significance of and dependence on the local partners. This lack of understanding the different contexts seemed to pose a barrier to the flowing of even encoded knowledge at least occasionally, even though the fact that many office employees had previously worked at the field made the building of shared understanding easier.

Whereas the office mainly requires encoded knowledge *from* the field, they still would want deeper *embodied* knowledge and know-how, even *knowing*, to flow out *to* the field: the interviewees noted that when MFA shifts its focus and requirements, it is not enough to send written guidelines and manuals to the field explaining the changes, but that it is a long process requiring training and thorough communication. Even though one field worker described it to be *"the original sin of the HQ that they imagine that when they send out an email every recipient has really read it"*, the office employees themselves emphasized the need for other forums than email as well, as described above, and also wondered how many of the field workers really read the sent emails. One of the office employees explicitly mentioned that they do not know how the know-how at the office is supposed to be flowing to the field, even though they clearly recognized the need for it. As an example, the above-mentioned Project Manual and current Programme Plan, even though they had in theory been created in collaboration with representatives from the field as well, seemed not to be documents that would have been eagerly read and learned from at the field. Interviewees from both the office and the field agreed on that new

instructions and directions from these documents needed personalized practices for them to be truly known, followed and implemented at the operational level.

The quotations from the interviewees describing the field-office gap are presented in Table 6 below. As described above, the gap between the different regions, Asia and EAMECA, is even wider still, and knowledge flows between these regions are discussed next.

Table 6. Quotations regarding the gap between the field and the office

Quotations from the interviews
Now it sometimes feels that this [office] is quite disconnected from the field. *(Office)*
We're from here quite little in contact with the field --- There's sometimes a bit of gap that what's the knowledge we need and what they think we need. *(Office)*
I'm quite a little directly in contact to [the field]. *(Office)*
The bottleneck is here between the field and Helsinki office, so that the knowledge somehow doesn't so efficiently go from here to there or from there to here. *(Field)*
Actually I think there's surprisingly little contact to Helsinki --- now when I start thinking about it, at the end of the day I know terribly little about what's decided and talked and what's important at Helsinki. *(Field)*
Then between the fields and the office, there's no friction but the flow of knowledge, that's sometimes struggling quite badly. *(Office)*
When now the regional managers or program managers or what they are, they go through it and learn it, then after that it should be implemented, reported to the country managers and program coordinators so that they would get the knowledge too. *(Field)*
Quite seldom then [I'm in contact] from here to the Helsinki office, seldom directly. *(Field)*
The challenge is that when the MFA gives out new announcements and messages and definitions of policy, that knowledge doesn't necessarily flow to the grassroots, so that people would be aware of them, for they have their own processes. *(Field)*

4.4.2 HORIZONTAL KNOWLEDGE FLOWS WITHIN THE FIELD

The horizontal knowledge flows can be observed at three different levels. In the level closest to the grassroots, the four sub-regions form their own entities, within which knowledge flows more or less smoothly, when taken into account the still great distances between the individual countries. The mentioned monthly Skype-meetings were the backbone of the knowledge flows within the sub-regions. In the middle-level, within the main regions of Asia and EAMECA, knowledge still flowed to some extent: as the employees met each other more often face-to-face in the annual workshops and Fida days, there had been more possibilities to form relationships and social networks, facilitating the ease of communication even when collaborating and communicating from the distance. Furthermore, the Regional Advisors served as an additional horizontal link within their own regions, facilitating the flowing of knowledge between the two sub-regions within one main region.

The greatest blocks in the knowledge flows at the field were found, understandably, between the two main regions. As mentioned above, at the time of the field study of this thesis, the only formal links between the different regions were the Regional Managers and Directors, making them the bottle-necks in the horizontal direction as well. As the managers' days are quite busy running the daily operational tasks, they do not necessarily have time to consider even the knowledge needs of their own regions, much less the benefits of sharing knowledge to more distant locations. Almost all the interviewees from the field below the managerial level, when asked about the sharing of knowledge to or from the other region, bluntly stated that that does not

happen. As described above, this *"crack between tectonic plates"* characterizing the connection between Asia and EAMECA is a recognized problem that is tried to be at least partially solved with the new global teams.

When the knowledge flowing between the office and the field is mainly encoded by nature, there seems to be hardly at all encoded or embrained knowledge being shared between the different countries at the grassroots level. The Regional Directors and Managers might read at least the summaries of evaluations from other regions, but otherwise sharing of explicit knowledge between the regions is at the most serendipitous and dependent on personal relationships between individual employees. Again, within regions and sub-regions, the Regional Advisors could disseminate both explicit and tacit knowledge between the different countries within their own areas, thus being an essential part of ensuring regional knowledge flows. Additionally, Senior Advisors could also e.g. run trainings at the events of other regions as well, thus forming at least a slight stream of knowledge between the two regions.

Table 7 below presents quotations regarding the gap between the two regions within the field.

Table 7. Quotations regarding gaps in knowledge flows between Asia and EAMECA

Quotations from the interviews
Those people [in the other region] are quite unfamiliar so that I don't even know from whom I could start asking things --- it's quite a foreign region to me. *(Field)*
I think one channel is the management team. *(Office)*
Our regional management team thinking, it's started from sharing the things from different fields together. *(Office)*
Because for me for example [the other region] is quite unfamiliar. *(Field)*
We've noted that peer learning is important, and our ideal that we've been hoping for all the time, that south-south collaboration would increase, and it won't succeed if the only connection is compiling reports. That's why we emphasize strongly that there needs to be more of coming together. *(Field)*
There's probably a crack in the tectonic plates between us. We don't know anything about what the [other region] is doing. Well maybe somebody does, [the regional director] knows a lot but I've got no knowledge at all about what happens in [the other region]. *(Field)*
Well I can contact Fida people elsewhere if I know they have knowledge on this, but if I don't know it then…it's challenging. *(Field)*
Well thus far there hasn't been [any structure or connection between the regions], and we've been quite apart and have worked in different ways. --- Maybe now when these teams are being launched --- there will be more cross-dialogues between the regions. *(Field)*
There are no channels for [sharing things with the other region]. But if I would want to share something, if I really thought it's important…how would that go the best way…often I just start talking about the thing to as many people as I just can, and then somebody gets it. *(Field)*

4.4.3 THE NEED FOR CONTEXTUAL KNOWLEDGE

It was evident from the empirical data that the closer the employees were to the grassroots, the more dissatisfied they were with the amount of knowledge available to them. Several of the interviewees mentioned a wish to have more of *contextual* knowledge. The interviewees from the managerial level, on the other hand, did not mention this shortage of knowledge – on the contrary, they felt that sometimes they had even too much of knowledge that would not even have to circulate through them. The managers, though, were aware of this difference in the knowledge levels: when asked about the quality of communication on a general level, one of the managers commented that *"I think I'm no good to answer that, for I can say that yeah, I'm in the know, but that doesn't yet tell anything."* One of the office employees aptly summarized the need for context and reciprocity in knowledge sharing:

> *Part of this work is that we need to communicate, if not face to face then at least with Skype. That the knowledge that comes, there needs to be this reciprocity that it's understood correctly, what is the context [of it]. (Office)*

Other quotations regarding the need for contextual knowledge are gathered in Table 8 below.

Table 8. Quotations regarding the need for contextual knowledge

Quotations from the interviews
Didactically all our trainings are built so that you can't use that material if you aren't there when the right using of the material is taught. Even if you copied the materials there's always some key points you can't utilize unless you hear what's the right way we hope the materials are used. *(Field)*
I don't know if [the things you hear at the open office] are the most important knowledge, but it's a lot of that which supports my own work. *(Office)*
In the [monthly Skype-meeting] I for the first time got a lot of that knowledge which is just nice to know, even though it doesn't directly affect [my own working]. *(Field)*
I'd like that the knowledge would be shared not too parsimoniously. --- Like, I don't even have to comment on things but so that I know what's going on. --- So that I'd get enough knowledge that I could understand where we're going and what are we talking about. *(Field)*
[In some of the meetings] it's more 'how do you do' knowledge --- There can come up things like 'oh, that's what's going on with you now' and 'that's the important thing now', or 'oh that's taking a lot of effort now and you're struggling with that thing now', and this kind of sharing, it feels good when one gets to understand where the others are at the moment. --- It sort of gives energy to this. *(Office)*
[In the meetings] you get that 'nice to know' knowledge. *(Office)*
Sometimes I've been annoyed by that I don't think I know enough about what's going on in Fida. *(Field)*
The more you know about different things and what works where, then you can maybe somehow apply it to your own country, that's why it might be good to read the evaluation reports from [the other region]. *(Field)*

The wish and need for contextual knowledge came up in relation to the general events and overall situation of the whole organization, but also in relation to the (tri-)annual reports: as discussed above, it was seen that the mere reports from other countries and regions are not enough to convey the richness of the surrounding contexts, and thus they were not applicable in other countries. Additionally, it was also mentioned, that the trainings conducted by Fida were such that mere materials are not enough, but the right *usage* of them needs to be taught as well, and that can only happen in synchronous, preferably face-to-face situations. A few of the interviewees also wondered whether the national cultures and conditions in different regions hindered or even made it impossible for the knowledge from one country to be applicable at all in different countries. However, at least the benchmarking of how peers in practice applied the methods and tools in use in all the countries was mentioned as being at least possibly valuable even between different regions.

The significance of contextual knowledge for organizational learning was also noticed by some of the interviewees. *"We didn't necessarily yet have that broader viewpoint to things. Like, even if I could take care of the small technical details, what about the long-term planning --- when considering the whole region and whole Fida"*, one of the field workers pondered. On the other hand, one of the managers from the field noted that people are different: some employees would want to be in the know of broader contexts, whereas others would prefer concentrating only on their own work duties. This manager emphasized the need for all non-sensitive knowledge to be open and available for everyone in SharePoint, and pointed out that there must be some proactivity in the employees themselves, for them to actively search for the knowledge they need.

4.5 ORGANIZATIONAL LEARNING IN FIDA

Fida has established many practices to ensure that the organization continually learns and develops, both on individual, project or group, and organizational levels. As in this thesis the focus is on the organizational level, the first two will only be shortly introduced, whereas the organizational level will be discussed in more detail.

On individual level Fida has orientation and training plans for every employee, as well as regional training plans for the overall development of the employees in each area. The employees also have regular development discussions with their supervisors. On the project level the continuous monitoring and reporting is, in addition to verifying the impact of the Fida programmes, aimed at developing the operations in each of the countries, and making sure the project groups constantly learn. Additionally, the above-mentioned regional training workshops are aimed at disseminating new skills and knowledge throughout the whole organization and they can be seen going through all the different levels of learning within the organization.

On a general level, almost all the interviewees mentioned that there is a strong *will* to learn and develop as an organization, but the implementation is not always thought through or applied the same ways in different locations. For example, being able to adapt to the new requirements of the MFA was seen as an example of effective learning, but on the other hand some of the interviewees mentioned also that this dependence on MFA hindered learning and developing other aspects of the organization. One of the interviewees, when asked whether Fida is a learning organization, answered laughing that it is rather *"changing"*: both the dependence on MFA for the funding and the structure as an association where the highest authority is at the board – whose members necessarily are not very familiar with development cooperation – were mentioned as factors making the organization quite slow to adapt to new situations.

At the organizational level the four main means to ensure learning seem to be the mentioned training workshops, the program evaluations with their follow-ups, the development idea process called IVT, and the newly-established global teams. As the training workshops are already discussed above, here only the last three will be described.

4.5.1 PROGRAM EVALUATIONS

As mentioned, in addition to constant monitoring and reporting of operations, all the Fida country programmes are evaluated at least once in the four-year cycle, and also different entities and aspects of the operations are evaluated at least semi-regularly: e.g. the psycho-social support functions of Fida were evaluated recently. Furthermore, when the latest four-year cycle was being planned, the organization ordered an external meta-analysis of all the evaluations and annual reports conducted during the previous cycle, to ensure the learnings gained from them would be made good use of. In general, the evaluations are made by an external evaluator, even though also internal evaluations are conducted *"every 2 to 5 years"*, as the current programme states. Additionally, e.g. the most recent evaluation, the Cambodia country programme evaluation conducted in early 2018, was done together with an external consultant and a Fida employee, *"in order to enhance organizational learning and later follow-up of Country Programme."*

There are many practices planned to ensure the learnings from the evaluations are truly utilized, not only noted and then forgotten. After every evaluation there is *a reflection event* to discuss and analyze the findings, where the evaluator presents the main recommendations to a wide audience – according to the current programme, the attendees include Executive Director, Regional Directors, Regional Manager of the region in question, the

employees working in the country in question, office managers in Finland and the development cooperation team from the office. The great number of participants from different regions is meant to ensure that the learnings from each evaluation are disseminated to the whole organization. However, several interviewees mentioned that the actual number of attendees is not as high as described in the programme, and it does not need to be either: the analysis events often concentrate on minor details of the programme in question, and it is not beneficial for e.g. all the directors and managers to spend their time on these aspects, whereas the employees working in that country programme greatly benefit from these discussions: one of the field workers described that without the reflection events *"I wouldn't quite say we're lost, but one gets so much help for this work and follow-up and planning and other things too from them."*

After the reflection event the evaluations are complemented with a follow-up document with concrete steps to implement, to make sure the recommendations are taken into account and required changes made. These follow-up plans are included in the annual reports of the programmes and monitored accordingly. Nevertheless, some of the interviewees expressed doubt on the actual implementation of the follow-up plans and utilization of the gained learnings: *"It almost ends with that document, after that they're not really [followed]."* There however seemed to be variation regarding the implementation of the follow-ups; even though some of the interviewees were doubtful about their implementation, some seemed to follow them by the book.

As mentioned above, for the current programme period Fida has planned to start a new *sharing and learning* method to ensure different regions learn from each other. While the reflection events are planned to concentrate on the learnings for the country programme in question, the sharing and learning events should have a wider perspective and focus on what other programmes can learn from the evaluation. Here the attendance of the directors and managers is more justifiable, for they have the broadest view to different programmes and their needs. As said, this method is a new one, and its implementation has yet not started. However, the fact that most of the interviewees heard of this new method for the first time when the researcher asked about it during the interviews gives a textbook example of the challenges related to knowledge flows between the office and the field: even though the programme was planned in conjunction with the regions and thus it in theory it was familiar to the field workers as well, the final version was composed by the office and quite distant to the daily operations at the field. During the time of writing the thesis, the office employees were still considering the most suitable actions to implement the method in practice, but this is planned to be done in an iterative fashion, learning while doing and developing the method further after every realization of the events.

The evaluations were highly appreciated among the development cooperation employees, *"an extremely important tool"* for the programmes as one field worker described them. Even though there still seems to be some challenges in utilizing all the learnings and sharing them into the whole organization, the aim and will to succeed in it is still clear. Some of the interviewees mentioned the same idea when asked how to improve the sharing of the learnings from the evaluations and reports: there should be one actor, preferably from the office as they have got the broadest view to all the different programmes, responsible of summarizing the key recommendations from all the evaluations and reports from an organizational viewpoint, and collecting them in one storage place. At the moment the evaluation reports as well as other reports are stored in the folders of the respective programmes in SharePoint, and, as mentioned, no one is willing to *"search and comb all the Fida organization's [folders]"* to find something only *possibly* useful. Additionally, when I suggested this same idea to one interviewee, they immediately emphasized the need for *contextual*, tacit knowledge and added

that the summaries should be accompanied with open Skype-meetings, where anyone interested in the learnings from the evaluation could interactively discuss them with others and ask further questions.

4.5.2 THE IVT PROCESS

Another quite a new method Fida has implemented to facilitate organizational learning is the process of probing, testing and implementing development ideas from the employees. The process has three phases of ideation, preparation and implementation (in Finnish *idea, valmistelu, toteutus*, where the name IVT comes from), and the plan is that any employee with a development idea could initiate the process and be able to follow and take part into its progress through the different decision-making levels. There are instructions for the process in SharePoint, but most of the interviewees had not heard of it at all, at least not from any formal channels – one of the interviewees mentioned having by chance heard from a colleague *"an urban legend"* that such a process exists, but they did not know anything more of how to practically initiate it. Nevertheless, most of the interviewees did not regard the ignorance of the actual process as problematic, as they would anyways discuss any development ideas with their supervisors, who could then point them to the right documents and process steps.

4.5.3 THE GLOBAL TEAMS

As described above, Fida is currently starting to implement global teams, in order to facilitate *"the movement of knowledge and understanding between the regions and with the HQ",* as one of the interviewed directors phrased the objective of the new teams. Fida has already used global working groups in the planning phase of the overall development cooperation programme, and as the experience of these has been successful, applying the same idea into other aspects of operations as well has been a natural shift. The same interviewee also explicitly mentioned that one of the objectives of the global teams was to try and develop *"a learning organization"* and have *"more synergy between the regions".* Designing the teams, their main themes, members, and working practices has been done in collaboration with the different regions and HQ. One of the planned possibilities has also been that some of the main focus themes of Fida may not get a whole team, but instead only some appointed resource persons, nominated to be approached from any region whenever questions related to that theme emerge. However, during the thesis process the practical aspects of this plan were not yet decided on – e.g. how would everyone who might need to approach them know what their knowledge bases are, and that they are available in the first place. Nevertheless, the decision to establish these global teams and their careful consideration and planning demonstrate the overall ambition that exists in Fida to improve organizational learning and knowledge flows between different regions. At the time of gathering the empirical data of this thesis the global teams, however, were not yet working and thus did not affect the then current knowledge flows and organizational learning.

To summarize, it can be noted that Fida has a clear emphasis on organizational learning and its continuous improvement. In addition to the main methods for this described above, the current development cooperation programme mentions learning and developing the practices several times in different sections: Fida e.g. aims to develop its operations by *"sharpening the communication processes between regions and headquarters"*, and the reports and evaluations are planned to *"produce follow-up, learning, and development"*.

5 DISCUSSION

In this chapter I discuss the findings from the literature in relation to the results of empirical study, as well as answer the research questions of this thesis. Additionally, I also evaluate the reliability of the thesis. The first six sub-chapters discuss the different aspects studied and the answers to the research questions, whereas sub-chapter 5.7 considers the validity and trustworthiness of the study. In sub-chapter 5.8 I discuss the theoretical implications of my findings and suggest some aspects to study further in the future, and in sub-chapter 5.8 the practical implications of the findings are described.

5.1 DIFFERENT KNOWLEDGE FLOWS THROUGH DIFFERENT CHANNELS

Even though this thesis wanted to observe all types of knowledge flows, regardless of the type of the knowledge, it was evident both from the literature and from the results of the empirical study that different knowledge needs different channels. Simple codified knowledge, e.g. in the form of reports, can flow through codification mechanisms of *cooperation* and *stocking*, but complex tacit knowledge needs the personalized mechanisms of *companionship* and *flowing*. The challenges related to the flowing of tacit knowledge were evident both in the literature (Joia & Lemos, 2010; Boh, 2007; Ipe, 2003; Goh, 2002; Gupta & Govindarajan, 2000b; Haldin-Herrgard, 2000; Swan et al., 1999; Fahey & Prusak, 1998; O'Dell & Grayson, 1998) as well as in the case organization: in addition to the serendipitous sharing of tacit knowledge between friends in different countries, tacit knowledge only flowed through the personalized channels of collocated events and synchronous online meetings. Thus, the facilitation of knowledge flows and organizational learning needs to start by recognizing what type of knowledge is meant to be shared.

5.2 CONTEXT IS THE KEY

In addition to the significance of the type of knowledge, also the *context* of knowledge came up as a factor that cannot be overlooked. As Swan et al. (1999, p. 263) note, knowledge cannot be truly *transferred*, but it needs to be "continuously created and recreated", to be applicable in different situations and contexts (Huysman & De Wit, 2004; McDermott, 1999; Szulanski, 1996). Even though codified knowledge could, at least in theory, be easily transferred between different locations, the value of this transferred knowledge is arguable: it often lacks the *contextual*, tacit aspects that would enable its application in different situations, and the recipients are left without knowing *how to use* that knowledge. While this kind of knowledge is indispensable in running and following the actual operations, it does not greatly contribute to the de facto flowing of *applicable* knowledge and *knowing* between the different locations, and thus the value to the overall learning of the whole organization is at least questionable. As discussed, this need to understand the context of the knowledge to be shared and have a possibility to ask further questions was obvious from the results of the field work as well.

5.3 CULTURE NEEDS TO SPAN BOUNDARIES

On a general level, Fida's organizational culture was seen to be a strength of the organization: it was human-oriented, warm, open and flexible, just like the literature describes organizational cultures that support knowledge sharing to be (Chang & Lin, 2015; Mueller, 2014; Casimir et al., 2012; Al-Alawi et al., 2007; Newell et al., 2007; Alavi et al., 2005; Riege, 2005; Goh, 2002; De Long & Fahey, 2000). People felt they were free to talk or send email to anyone, the atmosphere was psychologically safe, and employees were not afraid to express their opinions and ask for help. In general, there seemed to be high levels of *affective* trust

within the organization, but the levels of *cognitive* trust appeared to be more varying and dependent on the closest colleagues and their skills and capabilities. As mentioned above, according to Swift & Hwang (2013) affective trust is more important than cognitive when the aim is to facilitate the sharing of knowledge between individuals, whereas cognitive trust affects more when aiming to building an environment facilitative to organizational learning. Accordingly, it seems that the sharing of knowledge in Fida, despite some challenges, still is more effective than organization-level learning within the organization. The empirical data did not give reliable results on the levels of *swift* trust, but the overall trusting and warm atmosphere implies that the employees in the organization tend to initially trust each other.

When asked about the organizational culture in Fida, most of the interviewees mentioned things related to the *atmosphere* and *social relations* at the organization; the explicit answers reflected mainly the levels of *values* and *artifacts* on the three-level framework of Schein (1990). However, at the level of the *basic assumptions*, the commitment to *high-quality work* and *continuous learning* were clearly seen in the empirical data. As discussed in chapter 4.3, in addition to all the managers at Fida being currently studying a degree on management, at least one third of the interviewees had studied or were at the moment studying even several degrees on the side of the work.

As discussed above, employees at Fida described themselves feeling safe and free to talk to and approach anyone in case they needed help. However, the mere *freedom* to talk does not guarantee truly *reaching over* geographical or functional boundaries: the physical proximity and copresence bring about such easiness to the communication that seems close to impossible to be attained without them even in the most open and safe environments.

Even though the organizational culture was humanly warm, and the employees were highly committed and motivated to do excellent work in their own projects, the culture seemed not to put high value to *boundary-spanning* activities. As discussed in chapter 2.3.3, *T-shaped* or boundary-spanning skills refer to individuals' capabilities to look beyond their own, immediate contexts, and contribute to the learning and development of the whole organization (Reiche, 2011; Lee & Choi, 2003; Hansen & von Oatinger, 2001). The *espoused values* (Schein, 1990), e.g. in the current development cooperation programme, highly emphasize organizational learning and knowledge sharing between different regions, but on the practical level this has thus far not been reached nor encouraged: the employees are too busy in just running the daily operations in their own locations to be able to take the time to reflect the development of the overall organization or who could benefit from the knowledge they have. Even though some of the interviewees had recognized the need for these kind of activities and would have had the motivation to contribute in a broader scale, especially at the field the shortage of time for cross-regional collaboration and the lack of incentives to share knowledge beyond one's own immediate environment created an atmosphere where employees, even when they in theory would want to both contribute to and get contribution from other areas and regions as well, in practice did not seem to value such activities. O'Dell & Grayson (1998, p. 166), in a similar vein, encourage managers to consider the question of "How can those who have best practices be given the time and support they need to serve as coaches to the rest of the organization?"

The first research question of this thesis was:

RQ1: What kind of an organizational culture facilitates knowledge flows and organizational learning within a global, knowledge-intensive organization?

Based on the findings from the literature, the needed organizational culture is *psychologically safe* (Edmondson & Lei, 2014; Siemsen, 2009; Edmondson, 1999), has *high levels of trust* (Swift & Hwang, 2013; Casimir et al., 2012; Newell et al., 2007; Jarvenpaa & Leidner, 1999; Jarvenpaa et al., 1998), and is oriented towards *openness, collaboration, learning and empathy* (Mueller, 2014; Jacks et al., 2012; Al-Alawi et al., 2007; Alavi et al., 2005; Janz & Prasarnphanich, 2003; Goh, 2002; De Long & Fahey, 2000; von Krogh, 1998). The results of the empirical study, however, indicate that also the valuing of *boundary-spanning activities* is a necessary cultural antecedent enabling knowledge flows and organizational learning within a global, knowledge-intensive organization.

The literature highlights the significance of organizational culture as the prime facilitator of knowledge flows. However, the results of the empirical study point to the direction that in global settings culture alone is not enough: the challenges related to the lack of co-presence mitigate the advantages of even most supportive organizational cultures. Thus, the need for the organizational structure and organizational work practices to facilitate knowledge flows is inescapable in dispersed organizations.

5.4 ORGANIZATIONAL STRUCTURE NEEDS TO EMBED COMMUNITIES

When compared to the structural framework presented by Lam (2000), it can be argued that Fida's current structure is somewhere in between *professional bureaucracy* and *operating adhocracy*. According to Lam (2000), in operating adhocracies the most used type of knowledge is embodied, and this applies to the local contexts within which the field workers conduct the daily operations: the employees are all committed professionals who work very, even extremely independently in their own countries in different situations and contexts, needing great amounts of embodied knowledge and experience to be able to adapt to the local circumstances. On the other hand, when observing the situation within the global Fida structure, the employees need great amounts of embrained knowledge to be able to follow the official instructions and guidelines, and the structure resembles more a professional bureaucracy.

The problems Lam (2000) describes related to these structures could be observed in Fida as well. Within the global context where the structure resembles that of a professional bureaucracy, sharing knowledge horizontally is rare and restricted, and the organization as a whole is very slow to learn and adapt its operations. Furthermore, the organization seems to suffer also from the challenges related to operating adhocracies: even though the employees at the field gather great amounts of embodied knowledge, no-one is responsible of articulating, codifying and sharing that knowledge further. Thus, the findings from the field study support the propositions made by Lam (2000).

As mentioned, Fida has recognized these problems and taken steps to move towards a *J-form organization* (Lam 2000). Temporary global teams have already earlier been established for certain tasks, such as planning the programme, but now the objective is to form permanent teams spanning over the regional boundaries and facilitating knowledge flows and organizational learning throughout the organization: these global teams are close to the concept of communities of practice (Wenger & Snyder, 2000; Brown & Duguid, 1991, 1998, 2001) discussed above. As Lam (2000) describes, this team-based structure can serve as the intersection of the horizontal and vertical knowledge flows, thus establishing in Fida as well new channels for learning and

knowledge flows. Accordingly, the findings from the empirical study support the propositions made by Lam (2000) of the characteristics and benefits of a J-form organization: the benefits that the interviewees were expecting from the new global teams were remarkably similar to the benefits Lam (2000) lists for the J-form organization discussed above. As McDermott & O'Dell (2001) mentioned, these kind of changes in the knowledge management aspects (even when they are not labeled as that) need to fit to the existing culture of an organization, instead of trying to impose to the organization something totally unsuitable for its current reality. It seems Fida is succeeding in this aspect, for the idea of global teams is already familiar within the organization.

The second research question of this thesis was:

> *RQ2: What kind of an organizational structure facilitates knowledge flows and organizational learning within a global, knowledge-intensive organization?*

It can be stated that the organizational structure serves as the main *canal* of knowledge flows, ensuring that the most critical knowledge flows throughout the organization. In order for these canals to truly facilitate the flowing of useful knowledge and its application within an organization, they need to acknowledge the inherent differences between tacit and explicit knowledge. Thus, and as supported by the reviewed literature and the results of the empirical study, it seems that the most suitable formal structure for global, knowledge-intensive organization is at the same time *as flat as possible*, and *as networked as possible*, or a *J-form organization* (Joia & Lemos, 2010; Zheng et al., 2010; Chen & Huan, 2007; Riege, 2005; Lee & Choi, 2003; Newell et al., 2002; Lam, 2000; Nonaka, 1994).

In relation to the hierarchical levels, Fida only has two levels of management before the grassroot, and thus the structure seems to be in accordance with this ideal. However, it seems that even two levels of hierarchy can be too much, if it is not clear to the employees who should and can be contacted in what situations. The employees seemed to understand the need to ensure that decision-making follows the hierarchy, sometimes to the degree that it hindered the flowing of knowledge not related to decisions. There could, furthermore, be noticed a silo effect, where the employees in each country were mainly in connection with their own local environment, and only through the vertical line to the rest of the organization. As discussed, there had been no formal structural choices, apart from the management level, to facilitate knowledge flows between the two regions. Between the office and the field, on the other hand, the unclarity of the structure sometimes hindered the knowledge flows: as it was not always clear to what level to communicate to, even quite simple flows of encoded knowledge might be blocked. Followingly, even the best structure needs support from effective and consistently followed practices.

5.5 DISPERSED SETTINGS REQUIRE INSTITUTIONALIZED AND PERSONALIZED PRACTICES

The above-described practices for sharing knowledge at Fida are easy to be set in the knowledge flow circle presented earlier in Figure 7. The practices for sharing codified knowledge within Fida fall into the area of *stocking* mechanisms, and they ensure that the main *contents* of the actual operations are communicated clearly and according to the instructions. However, even though the reports were an indispensable tool for the daily operations at each of the countries and a necessary documentation of the impact of the overall development cooperation activities, they did not play a significant part in facilitating knowledge flows and organizational

learning within the whole organization. As the reports were compiled to present the *outcome* of operations, not the *process* through which it was achieved, they could not serve as a resource for other programmes and projects: the encoded knowledge within them was too context-dependent and lacking the necessary tacit aspects to enable the usage of the knowledge elsewhere. Additionally, the reports were stored in such a way that even if a field worker would *want* to read a report from another country, *finding* and *accessing* it would be a challenging task itself. As Fida had understood the shortcomings of these codified mechanisms, the organization had established several *personalized* mechanisms to ensure that richer knowledge would flow between different locations; these included e.g. the shared events and monthly meetings. The main formal organizational work practices Fida has established are applied into the knowledge flow circle in Figure 16 below.

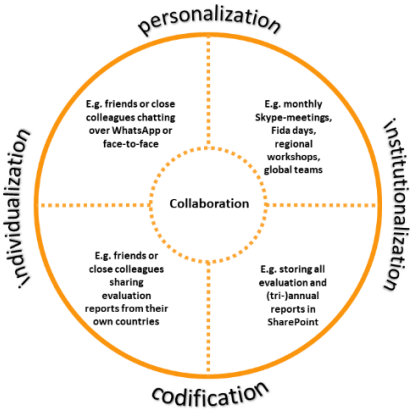

Figure 16. Fida's organizational work practices depicted in the knowledge flow circle

When considering knowledge flows between the different countries in one region on one hand, and between the two different regions on the other, it is apparent that in dispersed settings, the need for *institutionalized* mechanisms is inescapable. The results of this study show that where there are no formal practices established to ensure sharing of knowledge, the flows are next to non-existent. The gap between the two regions was one of the most strongly expressed details in the interviews with the field workers below the managerial level.

The third research question of this thesis was:

> *RQ3: What kind of organizational work practices facilitate knowledge flows and organizational learning within a global, knowledge-intensive organization?*

Following the discussion above, the results of this study strongly suggest that the required organizational work practices for facilitating knowledge flows and organizational learning within global, knowledge-intensive organizations are *institutionalized* and *personalized*, i.e. formally established and supported *flowing* practices that facilitate interactions between people.

5.6 ORGANIZATIONS LEARN WHEN INDIVIDUALS HAVE TIME FOR REFLECTIVE DIALOGUES

As described above, organizational learning processes are close to the knowledge processes, and knowledge and learning are inseparably intertwined (Castaneda et al., 2018; Argote, 2011; Vera & Crossan, 2003). While concentrating on knowledge flows tries to establish how does knowledge move between individuals and

groups, concentrating on organizational learning shifts the focus to the organizational level: how can the whole organization truly learn and develop its daily operations by exploiting its existing knowledge.

When observing the case organization through these lenses, it is clear that Fida has established many institutionalized practices to facilitate organization-wide learning. Even though *evaluations* are a necessity deriving from external factors as well, they are also aimed to be exploited and learned from internally, and both codified (*stocking*) mechanisms, in the form of evaluation reports and follow-up plans, and personalized (*flowing*) mechanisms, in the form of post-evaluation meetings, are used to ensure that the learnings and new knowledge truly disseminate throughout the whole organization. The *global teams* are established for the very reason of ensuring knowledge flows between different locations and that the different parts of the organization could learn together and benefit from the knowledge of each other. Finally, the *IVT process* is an additional channel for individual insights to grow into organizational embedded knowledge and changing organizational work practices. The practices Fida uses for sharing knowledge and learning on the organizational level are presented in the organizational learning circle in Figure 17 below.

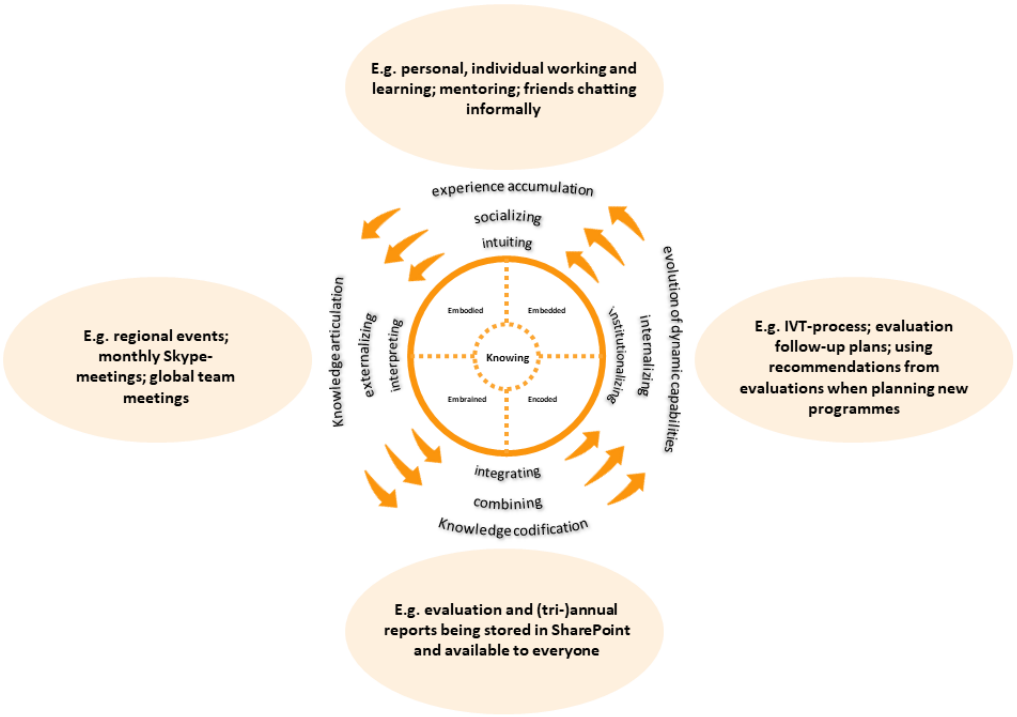

Figure 17. Fida's practices for facilitating organizational learning

At the most basic level organizations learn when their individual employees learn (Grant, 1996; Simon, 1991): in Fida's case this means simply *learning by doing*, or, in Crossan et al.'s (1999) terms *intuiting* and in Zollo & Winter's (2002) terms *experience accumulation*. Additionally, mentoring and friends or colleagues informally chatting and sharing knowledge enable *socializing* (Nonaka, 1994) *embodied* and *embedded* knowledge from one employee to another. The practices for *knowledge articulation* (Zollo & Winter, 2002), *externalization* (Nonaka, 1994) or *interpretation* (Crossan et al., 1999) are highly valued in Fida, and many of the used organizational practices fall into this area: e.g. monthly regional Skype-meetings and the meetings of the new global teams, as well as all other regular meetings for knowledge sharing facilitate organizational learning both on the levels of individuals and groups.

Practices for *knowledge codification* (Zollo & Winter, 2002), *combination* (Nonaka, 1994) and *integration* (Crossan et al., 1999) shift learning towards organizational level and facilitate the creation and sharing of collective *encoded* knowledge. However, both according to the reviewed literature as well as the results of the empirical study, the real *value* of this encoded knowledge tends to be quite low: even if at least some parts of the knowledge in question *can* truly be codified, its *finding* and *applying* is rare (Joia & Lemos, 2010; Goh, 2002; Haldin-Herrgard, 2000; Cook & Brown, 1999; Swan et al., 1999; Fahey & Prusak, 1998; O'Dell & Grayson, 1998; Blackler, 1995). In Fida as well the results show that the encoded knowledge in the reports tends to be *reduced* to such a level that its value to those who do not know the *context* of that knowledge do not benefit from it. Additionally, even when the reports *could* offer some advantage to employees at different locations, there are no easy channels for them to be *aware of* or *access* that knowledge, as the current storage, SharePoint, is *"dysfunctional and fuzzy"*, in the words of one of the interviewees.

As mentioned above, "organizations are more than simply a collection of individuals; organizational learning is different from the simple sum of the learning of its members" (Crossan et al., 1999, p. 529). The practices described above, nevertheless, leave unanswered the question of how does the *embodied*, *embrained* and *encoded* knowledge gained from them become truly *embedded* into the whole organization. Fida aims to facilitate this process of *evolution of dynamic capabilities* (Zollo & Winter, 2002), *internalization* (Nonaka, 1994) and *institutionalization* (Crossan et al., 1999) by e.g. evaluation follow-up plans and utilizing recommendations from evaluations when planning new programmes. The IVT process, as well, intends to accompany *intuition* of individual employees through the whole organizational learning process into new organizational work practices, i.e. increased embedded knowledge. However, like the usability of the reports outside of their context was suspected by the interviewees, so was the actual *implementation* of these institutionalization-oriented practices arguable: the IVT process was familiar to hardly any of the interviewees, and the real *following* of the follow-up plans was questioned by several of the them.

The learning-orientation of Fida, described above in relation to the organizational culture, nevertheless, seems to manifest in the fact that Fida has recently initiated several practices aiming at organization-wide learning. Sharing and learning events, global teams and IVT process are all new methods targeted towards organizational learning and development. However, I could not establish certainly from the empirical data the *process* through which this new embedded knowledge had been formed – rather than moving from intuiting through interpretation and integration into institutionalization it seemed that the step of intentional *integration* was skipped almost totally. The overall process seemed to be more of a chain of miniscule happenstances than a purposeful series of steps. E.g. in relation to the sharing and learning events, no-one of the interviewees seemed to know how the method had ended up being written into the project manual. Some of the managers remembered the subject being discussed in the managerial meetings, and a few of the interviewees mentioned other employees who might know something about the origins of the idea, but mainly it just seemed that *somebody* had got the idea and written it into the manual, and now the organization was looking for ways to implement and institutionalize it. This can be described to be learning through integration into institutionalization, as the new practice had indeed been codified in the official instructions, but it certainly is far from a neat, intentional process flowing smoothly through all the sub-processes of organizational learning.

Based on the findings from this thesis, it seems that as was the case regarding knowledge processes described above in chapter 2.1.4, so it is in relation to organizational learning processes as well: they are merely

constructs built to help to analyze the overall flowing of organizational learning, not so much truthful descriptions of how that happens in real life. In practice organizations seem to learn through a *messy process* involving a lot of individuals coming together to interpret, externalize and articulate their knowledge together in reflective dialogues. The success and value of the following sub-processes of integration and institutionalization, however, can and should be facilitated, even though they probably cannot be strictly managed.

The overall research problem of this thesis is:

> **How can organizational culture, organizational structure and organizational work practices facilitate knowledge flows and organizational learning within a global, knowledge-intensive organization?**

The above discussion summarizes the findings both from the literature and the empirical study. The studied knowledge enablers can facilitate knowledge flows and organizational learning within global, knowledge-intensive organizations by providing *a safe, open and boundary-spanning environment* where *individuals from different locations are connected through a flat hierarchy and networked communities* and *institutionalized and personalized flowing practices* steer the movement of knowledge. Furthermore, as real life is too messy to submit to control and strict processes, organizations should aim to "hire smart people and let them talk to one another" (Davenport & Prusak, 1998, p. 88).

5.7 THEORETICAL IMPLICATIONS AND SUGGESTIONS FOR FUTURE RESEARCH

This thesis contributes to the field of knowledge management in two different aspects. Firstly, the findings *increase understanding of the factors affecting intraorganizational knowledge flows* within a global, knowledge-intensive organization. Especially the suggestion that organizational work practices are an overlooked enabler – or hindrance – of knowledge sharing beyond geographical boundaries deserves further investigation in the future studies.

Secondly, the proposed framework in Figure 12 provides a starting point for future discussions on the similarities, differences and bonding of two fields that are claimed to be merging together, namely knowledge management (KM) and organizational learning (OL) (Castaneda et al., 2018). *The synthesis of four eminent models* from these fields – the type of knowledge (Lam, 2000; Cook & Brown, 1999), knowledge conversion modes (Nonaka & Toyama, 2003; Nonaka & Toyama, 2002; Nonaka et al., 2000; Nonaka & Konno, 1998; Nonaka, 1994), 4I model of organizational learning (Crossan et al., 1999), and evolution of dynamic capabilities within organizations (Zollo & Winter, 2002) – hopefully helps in creating a shared understanding and common language among the researchers from these two sibling fields of study.

However, both the *knowledge flow circle* presented in Figure 7 and *the organizational learning circle* presented in Figure 12 are only *first propositions*. They should be tested and studied further, to establish whether they truly bring value to the discussion, instead of only baffling the field with more vague conceptualizations.

This thesis studied three knowledge enablers – *organizational culture*, *organizational structure* and *organizational work practices* – but two more were not discussed in detail but merely introduced. The literature

suggests, however, that *people* and *technology* are significant factors in sharing knowledge also on organizational level. In the future a longitudinal study observing all these five enablers together would considerably increase understanding of the *messy process of organizational learning and knowledge flows*.

5.8 PRACTICAL IMPLICATIONS

The findings of this thesis can give organizations valuable insights and tools to be utilized in both assessing the current situation of knowledge management activities as well as developing them further. These practical implications of the study will be discussed next.

Firstly, the findings emphasize that organizations need to *acknowledge the value of contextual knowledge* and *recognize what type of knowledge is wanted to be shared*. When sharing explicit knowledge, *the usability of the storage* and *the ease of finding relevant knowledge* should be guaranteed. When sharing tacit knowledge, employees should be given *enough time for reflective dialogues* and *a vast network of connections* from and to whom to share knowledge with.

Secondly, the value of supportive culture in ensuring smooth knowledge flows and organizational learning is significant. This thesis suggests that especially in global, knowledge-intensive settings the organization-wide emphasis on and appreciation towards *boundary-spanning activities* is notable. Organizations should intentionally encourage collaboration across locations by e.g. allocating time and resources to such activities, and by including knowledge sharing as part of the incentive system.

The findings from this thesis support the propositions made by Lam (2000) and Nonaka (1994): organizational structure in global, knowledge-intensive organizations should *embed communities*. While there should only be a few hierarchical levels, forming the skeleton of the organization, the intentionally built network of communities should bring "flesh and life" into the structure.

The *knowledge flow circle* presented in Figure 7 offers organizations a practical tool to evaluate their knowledge sharing practices. With the circle, organizations can assess whether their existing practices recognize the different canals and riverbeds flowing through the organization, and whether any of the four quadrants seems to be needing further development and support. The findings further suggest that in dispersed settings, organizations should make sure their *formal canals*, i.e. institutionalized flowing and stocking practices are adequate. Furthermore, it is suggested that when aiming to facilitate knowledge flows between different locations in a global, knowledge-intensive organization, the *personalized flowing practices*, i.e. enabling people to talk to one another, offer greatest benefits.

Finally, the *organizational learning circle* presented in Figure 12 is another practical tool organizations can utilize to assess the effects their practices have on organizational-level learning. However, the findings further suggest that learning in real contexts is too messy a process to be captured in models and frameworks. The *explicit knowledge* stored in these models lacks *the richness of tacit knowledge and knowing,* which are an indispensable part of understanding the true reality of organizational life. Thus, while acknowledging the value of institutionalized practices for smooth knowledge flows, to truly facilitate organizational learning organizations should "hire smart people and let them talk to one another" (Davenport & Prusak, 1998, p. 88).

5.9 EVALUATION AND LIMITATIONS OF THE STUDY

The validity of qualitative research is harder to evaluate than the validity of quantitative research, and different authors have suggested different methods (Tuomi & Sarajärvi, 2018; Corbin & Strauss, 2008; Eskola & Suoranta, 2008; Whittemore et al., 2001). Corbin & Strauss (2008, p. 297) note that "Quality in qualitative research is something that we recognize when we see it; however, explaining what it is or how to achieve it is much more difficult." In this chapter I evaluate the validity of this thesis following the classification of Tuomi & Sarajärvi (2018), which contains the criteria of *credibility*, *transferability*, *dependability* and *confirmability*. Additionally, I discuss ethical issues related to the study as well as some limitations to it.

Credibility or *internal validity* refers to whether the results generated by the researcher truthfully depict reality and the insights of the interviewees and other empirical data (Tuomi & Sarajärvi, 2018; Merriam, 2009; Whittemore et al., 2001). I took several means to ensure the credibility of my results. As described in chapter 3.1, methodological triangulation (Tuomi & Sarajärvi, 2018, p. 168; Ghauri & Grønhaug, 2010 p. 212; Merriam, 2009, p. 216; Eskola & Suoranta, 2008, p. 68) was used to validate data from different sources against each other. Additionally, I aimed to include rich variety of direct quotations from the interviewees, to let their own voice be audible in the results, which, according to Whittemore et al. (2001) increases the quality of the results. Merriam (2009, p. 217) notes that also member checks, i.e. discussing the emerging findings with the interviewees, increase the credibility of the results. In this case, I regularly discussed with the thesis advisor from the case organization, checking my ideas with her. Furthermore, in some of the latest interviews the interviewees, at the end of the interviews, were interested to know what I had found so far, and thus I could also check some of my ideas with them. However, it must be emphasized that the interpretations and possible mistakes in the results are still all my own.

Patton (1999) further includes the credibility of the *researcher* as an aspect to be considered in qualitative research. In this case, the researcher is a novice in the field of scientific study. Thus, it is possible and even probable that a more experienced researcher would have been capable of producing higher quality results: the design and conducting of the interviews, the precision and plausibility of the data analysis as well as the meticulousness and sharpness of reporting the results and findings might have been done with much more care and consideration if the researcher would have had more embodied and embrained knowledge of the studied subjects and the used methods. However, I have strived for providing adequate transparency to the choices, methods and steps of analysis, for the reader to be able to assess the credibility of my claims.

Transferability, *generalizability* or *external validity* of the results refers to their applicability to other situations and contexts (Ghauri & Grønhaug, 2010; Merriam, 2009). As the findings of this thesis itself suggest that the context is the key, and that some of the richness of knowledge is necessarily lost when it is codified, I take the whole idea of transferability of any results into other contexts with a grain of salt. However, for the reasons explained next, I believe that the insights found from the results can be *applied* and *re-created* in other contexts as well, as long as they are similar enough.

According to Merriam (2009, p. 227), rich and thick descriptions increase the transferability of the study results, as they convey to the reader the contextual aspects and let them themselves assess the applicability of the results into other situations. Whittemore et al. (2001, pp. 531, 532) refer to this same technique as vividness and point out that the "description should be detailed enough for interpretation of the meaning and context to

be vivid and visible." I strived for portraying the case organization and different aspects of the context in extensive scope – still "without overwhelming the reader with excessive detail" (Whittemore et al., 2001, p. 531) – to enable the reader to understand the broader picture and its effects on the case. Additionally, and as mentioned above, I included a considerable amount of direct quotations, for the reader to gain deeper understanding of the different aspects of the case.

However, it can be argued that the transferability of the findings of this study would have been stronger still had there been several cases instead of just a single one, as comparisons between the different organizations would have given invaluable insights into the studied phenomenon. This choice, nevertheless, was largely determined by the requirements of a master's thesis and the breadth expected from it: a multiple-case study would have required a substantially greater amount of work than allotted to a master's thesis. For the reasons explained above I, nevertheless, believe that the findings can be at least *applied* in different situations and contexts, if not directly *transferred*.

Dependability or *reliability* (Tuomi & Sarajärvi, 2018; Merriam, 2009) in qualitative studies refers to the *consistency* of the findings: when in quantitative studies the question would be whether the findings would be replicated would the study be repeated, in qualitative study the question is whether the results are consistent with the collected data. The dependability of the findings of a qualitative research can be increased by e.g. triangulation and other researchers evaluating the research process and results (Tuomi & Sarajärvi, 2018; Merriam, 2009). As mentioned, I applied methodological triangulation for the data gathering, to increase the validity and reliability of the study results. Additionally, during the thesis process I regularly discussed with the thesis supervisor, to ensure the choices I made and steps I took were acceptable and according to the scientific standard. However, it must again be emphasized that has there been any shortcomings left, the blame is still entirely on me.

Confirmability is a concept closely related to the above-mentioned dependability, and it refers to whether the findings can be confirmed by other researchers. Tuomi & Sarajärvi (2018) note that confirmability of the findings of qualitative research can be increased by an external evaluator assessing the research data, process, interpretations, results and findings. As mentioned, throughout the thesis process I checked the process and next steps with the thesis supervisor. However, due to ethical reasons described in the next paragraph, the full confirmation of the interpretations made from the data cannot be achieved. Nevertheless, I leave this thesis and its findings to be evaluated, criticized and confirmed in the future both by the case organization as well as other researchers studying the same subject.

When doing scientific research, the central significance of *ethics* cannot be forgotten (Tuomi & Sarajärvi, 2018; TENK, 2012; Ghauri & Grønhaug, 2010; Merriam, 2009; Eskola & Suoranta, 2008). According to the Finnish Advisory Board on Research Integrity (TENK), there are nine premises for the responsible conduct of research, three of which are especially relevant in regard to this thesis.

Throughout the thesis process I have strived to *follow the principles endorsed by the research community*, i.e., I have aimed to integrity, meticulousness and accuracy. I have aimed to transparently describe the different steps of the research, and to make clear what are the plain results of the study on the one hand, and what are my interpretations of it, on the other. Furthermore, I have striven to describe the data analysis in adequate detail and evaluate the quality of my findings comprehensively. Additionally, when describing the previous

literature and reporting the findings of the thesis I have striven to *appropriately cite others' work* and give credit to where credit is due.

According to TENK (2012), the empirical data for scientific research needs to be gathered with ethically sustainable methods. In this thesis, this has meant ensuring the anonymity of the interviewees and that no harm is caused to them or to the case organization. I have aimed to ensure these goals by several means. Firstly, before starting the thesis process I informed the case organization of the fact that master's theses are by Finnish law public documents and made sure that there are no objections against that. Furthermore, before the interviews the interviewees were informed of the purpose and confidentiality of them, and ensured that the recording of the interviews suited them. When reporting the results and findings of the thesis I have striven to ensure the anonymity of the interviewees and make sure that from the quotations cited in the work the speaker cannot be identified. Furthermore, as the sample size of 16 interviewees is rather small, I have been extremely careful to make sure that the identities of the sources of each quotation or insight are not exposed even to readers from the case organization itself. This has required quite cautious phrasing of the sentences, and for this reason details of the sources of each quotation are left vague, and in e.g. the tables aggregating quotations regarding certain subjects, only the location at either at the office or at the field is revealed. These precautions are necessary to make sure that no harm of any kind is caused for the interviewees from taking part in the study (TENK, 2012; Eskola & Suoranta, 2008).

There are further a few limitations to this study that still need to be discussed. Firstly, this thesis had quite an ambitious number of factors it wanted to observe – three aspects, organizational culture, organizational structure and organizational work practices, affecting two others, knowledge flows and organizational learning – and all these factors would have deserved their own, profound study. Thus, the level of examination could not be as deep as it could have been had there been fewer factors studied. Nevertheless, as the subject of knowledge flows and their outcomes in real organizational contexts is in fact affected by even far greater number of factors, I would argue that studying at least a few of them together sheds light to such facets that would not have been observable if tried to be isolated from the surrounding context.

From the practical side, one more limitation must be acknowledged. When starting the study, I assumed that the grassroots level of the Fida organization would be the Country Managers. However, it soon became evident that the real grassroots were still deeper at the local level, among the local employees running the daily operations. Thus, the findings from this study in the end cannot grasp the whole depth of the studied phenomenon but are left on the higher organizational levels. Additionally, the fact that this thesis only studied the knowledge enablers of organizational culture, organizational structure and organizational work practices leaves people and technology as knowledge enablers without deeper consideration. Followingly, the results are lacking depth in this regard as well.

REFERENCES

Al-Alawi, A.I., Al-Marzooqi, N.Y. & Mohammed, Y.F. 2007. Organizational culture and knowledge sharing: critical success factors. *Journal of Knowledge Management*, **11**(2), pp.22-42.

Alavi, M., Kayworth, T. R., & Leidner, D. 2005. An empirical examination of the influence of organizational culture on knowledge management practices. *Journal of Management Information Systems*, **22**(3), pp. 191–224.

Alavi, M. & Leidner, D. 2001. Knowledge management and knowledge management systems: conceptual foundations and research issues. *MIS Quarterly*, **25**(1), pp. 107-136.

Allyn, D. 2001. Mission mirroring: Understanding conflict in nonprofit organizations. *Nonprofit and Voluntary Sector Quarterly*, **40**(4), pp. 762-769.

Alvesson M. & Kärreman D. 2001. Odd Couple: Making Sense of the Curious Concept of Knowledge Management. *Journal of Management Studies*, **38**(7), pp. 995-1018.

Augier, M. & Vendelø, M. 1999. Networks, cognition and management of tacit knowledge. *Journal of Knowledge Management*, **3**(4), pp. 252-261.

Alvesson, M. 2001. Knowledge work: Ambiguity, image and identity. *Human Relations*, **54**(7), pp. 863-886.

Alvesson, M. & Kärreman, D. 2001. Odd Couple: Making Sense of the Curious Concept of Knowledge Management. *Journal of Management Studies*, **38**(7), pp. 995-1018.

Anders, A. 2016. Team Communication Platforms and Emergent Social Collaboration Practices. *International Journal of Business Communication*, **53**(2), pp. 224-261.

Andriessen, D.G. 2008. Stuff or love? How metaphors direct our efforts to manage knowledge in organisations. *Knowledge Management Research & Practice*, **6**(1), pp. 5-12.

Argote, L. 2011. Organizational learning research: Past, present and future. *Management Learning*, **42**(4), pp. 439-446.

Argyris, C. 1991. Teaching smart people how to learn. *Harvard Business Review*, **69**(3), pp. 99-109.

Bartol, K.M. & Srivastava, A. 2002. Encouraging knowledge sharing: The role of organizational reward systems. *Journal of Leadership & Organizational Studies*, **9**(1), pp. 64-76.

Bell, G. & Zaheer, A. Geography, Networks, and Knowledge Flow. *Organization Science*, **18**(6), pp. 955-972

Bender, S. & Fish, A. 2000. The transfer of knowledge and the retention of expertise: the continuing need for global assignments. *Journal of Knowledge Management*, **4**(2), pp.125-137.

Bernstein, E., Bunch, J., Canner, N. & Lee, M. 2016. Beyond the Holacracy Hype. *Harvard Business Review*, **94**(7-8), p. 38–49.

Bhatt, G. 2001. Knowledge Management in Organizations: Examining the Interaction Between Technologies, Techniques, and People. *Journal of Knowledge Management*, **5**(1), pp. 68-75.

Bhatt, G.D. 2002. Management strategies for individual knowledge and organizational knowledge. *Journal of Knowledge Management*, **6**(1), pp.31-39.

Bierly III, P.E., Kessler, E.H. & Christensen, E.W. 2000. Organizational learning, knowledge and wisdom. *Journal of Organizational Change Management*, **13**(6), pp. 595-618.

Bjørkeng, K, Skaret, M & Hydle, K.M. 2004. Extending practices: from local to organizational knowledge flows. In: Carlsen, A., Klev, R. & von Krogh, G. (eds). *Living knowledge – The dynamics of professional service work*. Basingstoke: Palgrave Macmillan, pp. 164-183.

Blackler, F. 1995. Knowledge, Knowledge Work and Organizations: An Overview and Interpretation. *Organization Studies*, **16**(6), pp. 1021-1046.

Bock G. & Kim, Y-G. 2002. Breaking the Myths of Rewards: An Exploratory Study of Attitudes about Knowledge Sharing. *Information Resources Management Journal*, **15**(2), pp. 14-21.

Boh, W.F. 2007. Mechanisms for sharing knowledge in project-based organizations. *Information and Organization*, **17**(1), pp. 27-58.

Borgatti, S.P. & Cross, R. 2003. A Relational View of Information Seeking and Learning in Social Networks. Management Science, 49(4), pp. 432-445.

Brown, J.S. & Duguid, P. 1991. Organizational learning and communities of practice: toward a unified view of working, learning, and innovation. *Organization Science*, **2**(1), pp. 40-57.

Brown, J.S. & Duguid, P. 1998. Organizing Knowledge. *California Management Review*, **40**(3), pp. 90-111.

Brown, J.S. & Duguid, P. 2001. Knowledge and organization: a social-practice perspective. *Organization Science*, **12**(2), pp. 198-213.

Casimir, G., Lee, K., & Loon, M. 2012. Knowledge sharing: influences of trust, commitment and cost. *Journal of knowledge management*, **16**(5), pp. 740-753.

Castaneda, D.I., Manrique, L.F. & Cuellar, S. 2018. Is organizational learning being absorbed by knowledge management? A systematic review. *Journal of Knowledge Management*, **22**(2), pp. 299-325.

Chang, C.L. & Lin, T.-C. 2015. The role of organizational culture in the knowledge management process. *Journal of Knowledge Management*, **19**(3), pp.433-455.

Chen, C.-J. & Huan, J.-W. 2007. How organizational climate and structure affect knowledge management – The social interaction perspective. *International Journal of Information Management*, **27**(2), pp.104-118.

Choi, B. & Lee, H. 2002. Knowledge management strategy and its link to knowledge creation process. *Expert Systems with Applications*, **23**(3), pp. 173-187.

Coffey, A. & Atkinson, P. 1996. *Making sense of qualitative data: complementary research strategies*. Thousand Oaks, California: Sage.

Cohen, W. & Levinthal, D. 1990. Absorptive Capacity: A New Perspective on Learning and Innovation. *Administrative Science Quarterly*, **35**(1), pp. 128-152.

Collins H. 1993. The Structure of Knowledge. *Social Research*, **60**(1), pp. 95-116.

Cook, S. D. N & Brown, J. S. 1999. Bridging epistemologies: The Generative Dance between Organizational Knowledge and Organizational Knowing. *Organization Science*, **10**(4), pp. 381-400.

Corbin, J. & Strauss, A. L. 2008. *Basics of qualitative research: techniques and procedures for developing grounded theory* (3rd ed.). Los Angeles: Sage.

Crossan, M.M., Lane, H.W. & White, R.E. 1999. An organizational learning framework: from intuition to institution. *Academy of Management Review*, **24**(3), pp. 522-537.

Davenport, T. & Grover, V. 2001. Special Issue: Knowledge Management. *Journal of Management Information Systems*, **18**(1), pp. 3-4.

Davenport, T. & Prusak, L. 1998. *Working knowledge – How organizations manage what they know*. Boston (Mass.): Harvard Business School Press.

DeCarolis, D.M. & Deeds, D.L. 1999. The impact of stocks and flows of organizational knowledge on firm performance: an empirical investigation of the biotechnology industry. *Strategic Management Journal*, **20**(10), pp. 953-968.

De Cooman, R., De Gieter, S., Pepermans, R. & Jegers, M. 2011. A cross-sector comparison of motivation-related concepts in for-profit and not-for-profit service organizations. *Nonprofit and Voluntary Sector Quarterly*, **40**(2), pp. 296-317.

De Long, D. & Fahey, L. 2000. Diagnosing Cultural Barriers to Knowledge Management. *The Academy of Management Executive*, **14**(4), pp. 113-127.

De Long, D. & Seemann, P. 2000. Confronting Conceptual Confusion and Conflict in Knowledge Management. *Organizational Dynamics*, **29**(1), pp. 33–44.

DeVaro, J. & Brookshire, D. 2007. Promotions and incentives in nonprofit and forprofit organizations. *Industrial & Labor Relations Review*, **60**(3), pp. 311-339.

Drucker, P. 1988. The coming of the new organization. *Harvard Business Review*, **66**(1), pp. 45-53.

Drucker, P. 1989. What business can learn from nonprofits. *Harvard Business Review*, **67**(4), pp. 88-93.

Dubois, A. & Gadde, L. 2002. Systematic combining: an abductive approach to case research. *Journal of Business Research*, **55**(7), pp. 553-560.

Edelman, L., Bresnen, M., Newell, S., Scarbrough, H. & Swan, J. 2004. The benefits and pitfalls of social capital: Empirical evidence from two organizations in the United Kingdom. *British Journal of Management*, **15**(1), pp. S59-S69.

Edmondson, A. 1999. Psychological Safety and Learning Behavior in Work Teams. *Administrative Science Quarterly*, **44**(2), pp. 350-383.

Edmondson, A. C. & Lei, Z. 2014. Psychological safety: The history, renaissance, and future of an interpersonal construct. *Annual Review of Organizational Psychology and Organizational Behavior*, **1**(1), pp. 23–43.

Eskola, J. & Suoranta, J. 2008. *Johdatus laadulliseen tutkimukseen* (8th ed.). Tampere: Vastapaino.

Fahey, L. & Prusak, L. 1998. The Eleven Deadliest Sins of Knowledge Management. *California Management Review*, **40**(3), pp. 265-275.

Ferrazzi, K. 2014. Getting Virtual Teams Right. *Harvard Business Review*, **92**(12), pp. 120-123.

Foss, N.J., Minbaeva, D.B., Pedersen, T. & Reinholt, M. Encouraging knowledge sharing among employees: How job design matters. *Human Resource Management*, **48**(6), pp. 871-893.

Ghauri, P. & Grønhaug, K. 2010. *Research methods in business studies* (4th ed.). Harlow: Pearson.

Goh, S.C. 2002. Managing effective knowledge transfer: An integrative framework and some practice implications. *Journal of Knowledge Management*, **6**(1), pp. 23-30.

Govindarajan, V. & Gupta, A.K. 2001. Building an Effective Global Business Team. *MIT Sloan Management Review*, **42**(4), pp. 63-71.

Granovetter, M. 1973. The Strength of Weak Ties. *American Journal of Sociology*, **78**(6), pp. 1360-1380.

Grant, R. 1996. Toward a Knowledge-Based Theory of the Firm. *Strategic Management*, **17**(Winter Special Issue), pp. 109-122.

Grover, V. & Davenport, T.H. 2001. General Perspectives on Knowledge Management: Fostering a Research Agenda. *Journal of Management Information Systems*, **18**(1), pp. 5-21.

Gupta, A. & Govindarajan, V. 2000a. Knowledge Flows within Multinational Corporations. *Strategic Management Journal*, **21**(4), pp. 473-496.

Gupta, A.K. & Govindarajan, V. 2000b. Knowledge management social dimension: lessons from Nucor Steel. *Sloan Management Review*, **42**(1), pp. 71-81.

Haldin-Herrgard, T. 2000. Difficulties in diffusion of tacit knowledge in organizations. *Journal of Intellectual Capital*, **1**(4), pp.357-365.

Hamel, G. 2011. First, let's fire all the managers. *Harvard Business Review*, **89**(12) pp. 48–60.

Hansen, M. 1999. The Search-Transfer Problem: The Role of Weak Ties in Sharing Knowledge across Organization Subunits. *Administrative Science Quarterly*, **44**(1), pp. 82-111.

Hansen, M. & Nohria, N. & Tierney, T. 1999. What's your strategy for managing knowledge. *Harvard Business Review*, **77**(2), pp. 106-116.

Hansen, M. & von Oatinger, B. 2001. Introducing T-shaped managers – Knowledge management's next generation. *Harvard Business Review*, **79**(3), pp.106-116.

Hazlett, S.-A., McAdam, R. & Gallagher, S. 2005. Theory Building in Knowledge Management - In Search of Paradigms. *Journal Of Management Inquiry*, **14**(1), pp. 31-42.

Hirsjärvi, S., Remes, P. & Sajavaara, P. 2007. *Tutki ja kirjoita* (13. osin uud. laitos.). Helsinki: Tammi.

Hirsjärvi, S. & Hurme, H. 2009. *Tutkimushaastattelu – Teemahaastattelun teoria ja käytäntö*. Helsinki: Gaudeamus Helsinki University Press.

Hull, C. & Lio, B. 2006. Innovation in non-profit and for-profit organizations: Visionary, strategic, and financial considerations. *Journal of Change Management*, **6**(1), pp. 53-65.

Huysman, M. & de Wit, D. 2004. Practices of Managing Knowledge Sharing: Towards a Second Wave of Knowledge Management. *Knowledge and process management*, **11** (2), pp. 81-92.

Ichijo, K., Krogh, von G. & Nonaka, I. 1998. Knowledge enablers. In: G. Krogh, J. Roos, and D. Kleine (eds.), *Knowing in Firms*. Thousand Oaks, CA: Sage, pp. 173–203.

Ipe, M. 2003. Knowledge Sharing in Organizations: A Conceptual Framework. *Human Resource Development Review*, **2**(4), pp. 337-359.

Jacks, T., Wallace, S. & Nemati, H. 2012. Impact of Culture on Knowledge Management: A Meta-Analysis and Framework. *Journal of Global Information Technology Management*, **15**(4), pp. 8-42.

Janz, B.D. & Prasarnphanich, P. 2003. Understanding the Antecedents of Effective Knowledge Management: The Importance of a Knowledge-Centered Culture. *Decision Sciences*, **34**(2), pp. 351-384.

Jarvenpaa, S., Knoll, K. & Leidner, D. 1998. Is Anybody out There? Antecedents of Trust in Global Virtual Teams. *Journal of Management Information Systems*, **14**(4), pp. 29-64.

Jarvenpaa, S. & Leidner, D. 1999. Communication and Trust in Global Virtual Teams. *Organization Science*, **10**(6), pp. 791-815.

Joia, L.A. & Lemos, B. 2010. Relevant factors for tacit knowledge transfer within organisations. *Journal of Knowledge Management*, **14**(3), pp.410-427.

Krackhardt, D. 1992. The strength of strong ties: The importance of philos in organizations. In: Nohria, N. & Eccles, R.G. (eds.), *Networks and organizations: structure, form and action*. Boston (MA): Harvard Business School Press, pp. 216-239.

Krackhardt, D. & Hanson, J.R. 1997. Informal Networks: The Company. In: Prusak, L. (ed.), *Knowledge in Organizations*. Boston (MA): Butterworth-Heinemann, pp. 37-49 (originally published in Harvard Business Review in 1993).

Kreutzer, K. & Jäger, U. 2011. Volunteering versus managerialism: Conflict over organizational identity in voluntary associations. *Nonprofit and Voluntary Sector Quarterly*, **40**(4), pp. 634-661.

Krogh, von G. 1998 Care in knowledge creation. *California Management Review*, **40**(3), pp. 133-153.

Krogh, von G., Nonaka, I. & Aben, M. 2001. Making the Most of Your Company's Knowledge: A Strategic Framework. *Long Range Planning*, **34**(4), pp. 421-439.

Lam, A. 2000. Tacit Knowledge, Organizational Learning and Societal Institutions: An Integrated Framework. *Organization Studies*, **21**(3), pp. 487-513.

Lee, H. & Choi, B. 2003. Knowledge Management Enablers, Processes, and Organizational Performance: An Integrative View and Empirical Examination. *Journal of Management Information Systems*, **20**(1), pp. 179-228.

Levin, D. Z. & Cross, R. 2004. The Strength of Weak Ties You Can Trust: The mediating Role of Trust in Effective Knowledge Transfer. *Management Science*, **50**(11), pp. 1477-1490.

Levitt, B. & March, J.G. 1988. Organizational learning. *Annual Review of Sociology*, **14**(1), pp. 319-340.

Majchrzak, A., Malhotra, A., Stamps, J. & Lipnack, J. Can Absence Make a Team Grow Stronger? *Harvard Business Review*, **82**(5), pp. 131-137.

March, J. 1991. Exploration and Exploitation in Organizational Learning. *Organization Science*, **2**(1), pp. 71-87.

Massingham, P. 2014. An evaluation of knowledge management tools: Part 1 – managing knowledge resources. *Journal of Knowledge Management*, **18**(6), pp.1075-1100.

McAllister, D.J. 1995. Affect- and cognition-based trust as foundations for interpersonal cooperation in organization. *Academy of Management Journal*, **38**(1), pp. 24-59.

McDermott, R. 1999. Why Information Technology Inspired But Cannot Deliver Knowledge Management. *California Management Review*, **41**(4), pp. 103-117.

McDermott, R. & Archibald, D. 2010. Harnessing your staff's informal networks. *Harvard Business Review*, **88**(3), pp.82-89.

McDermott, R. & O'Dell, C. 2001. Overcoming Cultural Barriers to Sharing Knowledge. *Journal of Knowledge Management*, **5**(1), pp. 76-85.

McElroy, M., Jorna, R.J. & van Engelen, J. 2006. Rethinking social capital theory: a knowledge management perspective. *Journal of Knowledge Management*, **10**(5), pp. 124-136.

Merriam, S.B. 2009. *Qualitative Research – A Guide to Design and Implementation*. San Francisco (California): Jossey-Bass.

Milne, P. 2007. Motivation, incentives and organizational culture. *Journal of Knowledge Management*, **11**(6), pp. 28-38.

Minzberg, H. 1980. Structure in 5's: A Synthesis of the Research on Organization Design. *Management Science*, **26**(3), pp. 322-341.

Mueller, J. 2014. A specific knowledge culture: Cultural antecedents for knowledge sharing between project teams. *European Management Journal*, **32**(2), pp. 190-202.

Mäki, E. 2008. *Exploring and exploiting knowledge - Research on knowledge processes in knowledge-intensive organizations*. Espoo: Helsinki University of Technology.

Nahapiet, J. & Ghoshal, S. 1998. Social Capital, Intellectual Capital, and the Organizational Advantage. *Academy of Management Review*, **23**(2), pp- 242-266.

Neeley, T. 2015 Global teams that work. *Harvard Business Review*, **93**(10), pp. 74-81.

Newell, S. 2016. Managing knowledge and managing knowledge work: what we know and what the future holds. *Journal of Information Technology*, **30**(1), pp. 1-17.

Newell, S., Bresnen, M., Edelman, L., Scarbrough, H. & Swan, J. 2006. Sharing Knowledge Across Projects: Limits to ICT-led Project Review Practices. *Management Learning*, **37**(2), pp.167-185.

Newell, S., David, G. & Chand, D. 2007. An Analysis of Trust Among Globally Distributed Work Teams in an Organizational Setting. *Knowledge and Process Management*, **14**(3), pp. 158-168.

Newell, S., Robertson, M., Scarbrough, H. & Swan, J. 2002. *Managing knowledge work*. Basingstoke: Palgrave.

Nicolini, D., Gherardi, S. & Yanow, D. 2003. Introduction: Toward a Practice-Based View of Knowing and Learning in Organizations. In: Nicolini, D., Gherardi, S. & Yanow, D. (eds.). *Knowing in organizations: A practice-based approach*. Armonk, N.Y.: Sharpe, pp. 3-31.

Nohria, N. & Eccles, R.G. 1992. Face-to-face: Making network organizations work. In: Nohria, N. & Eccles, R.G. (eds.), *Networks and organizations: structure, form and action*. Boston (MA): Harvard Business School Press, pp. 288-308.

Nonaka, I. 1994. A dynamic theory of organizational knowledge creation. *Organization science*, **5**(1), pp. 14-37.

Nonaka, I. & Konno, N. 1998. The Concept of "Ba": Building a Foundation for Knowledge Creation. *California Management Review*, **40**(3), pp. 40-54.

Nonaka, I. & Peltokorpi, V. 2006. Objectivity and Subjectivity in Knowledge Management: A Review of 20 Top Articles. *Knowledge and Process Management*, **13**(2), pp. 73-82.

Nonaka, I. & Toyama, R. 2002. A firm as a dialectical being: towards a dynamic theory of a firm. *Industrial and Corporate Change*, **11**(5), pp. 995-1009.

Nonaka, I. & Toyama, R. 2003. The knowledge-creating theory revisited: knowledge creation as a synthesizing process. *Knowledge Management Research & Practice*, **1**(1), pp. 2-10.

Nonaka, I., Toyama, R. & Konno, N. 2000. SECI, Ba and Leadership: A Unified Model of Dynamic Knowledge Creation. *Long Range Planning*, **33**(1), pp. 5-34.

Olson G. & Olson J. 2000. Distance matters. *Human-Computer Interaction*, **15**(2-3), pp. 139-178.

O'Dell, C. & Grayson, C.J. 1998. If we only knew what we know: Identification and transfer of internal best practices. *California Management Review*, **40**(3), pp. 154-174.

Orlikowski, W. 2002. Knowing in Practice: Enacting a Collective Capability in Distributed Organizing. *Organization Science*, **13**(3), pp. 249-273

Osterloh, M. & Frey, B.S. 2000. Motivation, Knowledge Transfer, and Organizational Forms. *Organization Science*, **11**(5), pp. 538-550.

Patton, M. 1999. Enhancing the Quality and Credibility of Qualitative Analysis. *Health services research*, **34**(5 Pt 2), pp.1189-1208.

Polanyi, M. 1966. *The tacit dimension*. New York: Anchor Day.

Prencipe, A. & Tell, F. 2001. Inter-project learning: processes and outcomes of knowledge codification in project-based firms. *Research Policy*, **30**(9), pp. 1373-1394.

Raub, S. & Rüling, C. 2001. The knowledge management tussle – speech communities and rhetorical strategies in the development of knowledge management. *Journal of Information Technology*, **16**(2), pp. 113-130.

Reiche, S.B. 2011. Knowledge transfer in multinationals: the role of inpatriates' boundary spanning. *Human Resource Management*, **50**(3), pp. 365-389.

Riege, A. 2005. Three-dozen knowledge-sharing barriers managers must consider. *Journal of Knowledge Management*, **9**(3), pp. 18-35.

Robertson, M. & Swan, J. 2003. 'Control- What Control?' Culture and Ambiguity within a Knowledge Intensive Firm. *Journal of Management Studies*, **40**(4), pp. 831-858.

Schein, E. 1990. Organizational Culture. *American Psychologist*, **45**(2), pp. 109-119.

Schulz, M. 2001. The uncertain relevance of newness: Organizational learning and knowledge flows. *Academy of Management Journal*, **44**(4), pp. 661-681.

Serenko, A. 2013. Meta-analysis of scientometric research of knowledge management: discovering the identity of the discipline. *Journal of Knowledge Management*, **17**(5), pp.773-812.

Serenko, A. & Bontis, N. 2013. The intellectual core and impact of the knowledge management academic discipline. *Journal of Knowledge Management*, **17**(1), pp.137-155.

Siemsen, E., Roth, A.V., Balasubramanian, S. & Anand, G. 2009. The influence of psychological safety and confidence in knowledge on employee knowledge sharing. *Manufacturing & Service Operations Management*, **11**(3), pp. 429–47.

Simon, H. 1991. Bounded Rationality and Organizational Learning. *Organization Science*, **2**(1), Special Issue: Organizational Learning: Papers in Honor of (and by) James G. March, pp. 125-134.

Soliman, F. & Spooner, K. 2000. Strategies for implementing knowledge management: role of human resources management. *Journal of Knowledge Management*, **4**(4), pp.337-345.

Starbuck, W. 1992. Learning by Knowledge-Intensive Firms. *Journal of Management Studies*, **29**(6), pp. 713-740.

Swan, J., Newell, S., Scarbrough, H. & Hislop, D. 1999. Knowledge Management and Innovation: Networks and Networking. *Journal of Knowledge Management*, **3**(4), pp. 262-275.

Swan, J., Scarbrough, H. & Newell, S. 2010. Why don't (or do) organizations learn from projects? *Management Learning*, **41**(3), pp.325-344.

Swift, P.E. & Hwang, A. 2013. The impact of affective and cognitive trust on knowledge sharing and organizational learning. *The Learning Organization*, **20**(1), pp. 20-37.

Szulanski, G. 1996. Exploring Internal Stickiness: Impediments to the Transfer of Best Practice within the Firm. *Strategic Management Journal*, **17**, pp. 27-43.

Tangaraja, G., Rasdi, R.M, Samah, B.A. & Ismail, M. 2016. Knowledge sharing is knowledge transfer: a misconception in the literature. *Journal of Knowledge Management*, **20**(4), pp. 653-670.

Tuomi, J. & Sarajärvi, A. 2018. *Laadullinen tutkimus ja sisällönanalyysi*. Uudistettu laitos. Helsinki: Kustannusosakeyhtiö Tammi.

Vera, D. & Crossan, M. 2003. Organizational Learning and Knowledge Management: Toward an Integrative Framework. In: Lyles, M. A. & Easterby-Smith, M. (eds.), *The Blackwell Handbook of Organizational Learning and Knowledge Management*. Oxford: Blackwell Publishing, pp. 122–142.

Wenger, E. C. & Snyder, W.M. 2000. Communities of Practice: The Organizational Frontier. *Harvard Business Review*, **78**(1), pp. 139-45.

Yin, R.K. 2014. *Case Study Research – Design and Methods* (5th ed.). Los Angeles: Sage.

Zack, M. 1999. Developing a Knowledge Strategy. *California Management Review*, **41**(3), pp. 125-145.

Zheng, W., Yang, B. & McLean, G.N. 2010. Linking organizational culture, structure, strategy, and organizational effectiveness: Mediating role of knowledge management. *Journal of Business Research*, **63**(7), pp. 763-771.

Zhuge H. 2002. A Knowledge Flow Model for Peer-to-Peer Team Knowledge Sharing and Management. *Expert Systems with Applications*, **23**(1), pp. 23-30.

Zollo, M. & Winter, S. 2002. Deliberate learning and the evolution of dynamic capabilities. *Organization Science*, **13**(3), pp. 339-351.

OTHER REFERENCES

Davies, A., Fidler, D. & Gorbis, M. 2012. *Future Work Skills 2020*. Palo Alto (California): Institute for the Future for the University of Phoenix Research Institute.

Economist Intelligence Unit (EIU). 2015. *Changing Roles: How Technology is Transforming Business Functions*. London: Economist Intelligence Unit.

Tutkimuseettinen neuvottelukunta (TENK). 2012. *Responsible conduct of research and procedures for handling allegations of misconduct in Finland*. Helsinki: TENK.

World Economic Forum (WEF). 2016. *The Future of Jobs – Employment, Skills and Workforce Strategy for the Fourth Industrial Revolution*. Geneva: World Economic Forum.

Nordbäck, E. 2018. Virtual teams – A review of enablers & barriers for their success. Unpublished manuscript.

APPENDICES

Appendix I: List of the internal documents of the case organization

Document	Content
Project Manual 2018-2021	Current detailed instructions on how to conduct actual operations at the field: guidelines, frameworks, timelines, templates etc.
Project Manual 2015	Previous detailed instructions on how to conduct actual operations at the field: guidelines, frameworks, timelines, templates etc.
Development Cooperation Annual Report 2016	The operations and results of development cooperation activities during 2016.
Development Cooperation Annual Report 2017	The operations and results of development cooperation activities during 2017.
Fida Meta-analysis 2017	A meta-analysis of all Fida's development cooperation activities, conducted by an external evaluator in 2017.
Fida Development Cooperation Programme and Implementation Plan for 2018-2021	The program of all the planned development cooperation activities during 2018-2021.
Fida Development Cooperation Programme and Implementation Plan for 2014-2016	The program of all the planned development cooperation activities during 2014-2016.
CSO2 Evaluation of Fida by MFA 2017	The evaluation of Fida's development cooperation and humanitarian assistance activities, conducted by the Finnish Ministry of Foreign Affairs in 2017.
Cambodia Evaluation Report 2018	The report of the evaluation of the development cooperation activities in Cambodia, conducted by an external and internal evaluator in cooperation in 2018.
Fida Financial Statement 2017	The financial statement 2017 of the whole Fida International.
Fida's organizational chart	The official organizational chart of Fida describing the structure of the organization.
Fida's starting instructions for team leaders (draft)	A draft of the instructions for team leaders on how to start new teams in Fida.
Annual tasks timeline for the HQ development cooperation unit	The timeline for the annual tasks for the HQ development cooperation unit.

Appendix II: Summary of the interviews

Position of the interviewee	Location	Duration of the interview
Development Cooperation Specialist; advisor of the thesis	Office	2:15:00
Development Cooperation Specialist	Office	1:20:00
Development Cooperation Assistant	Office	1:25:00
Development Cooperation Program Manager	Office	2:15:00
ICT Manager	Office	1:15:00
Regional Deputy Director	Field (Asia)	01:40:00 (Skype)
Technical Advisor	Field (EAMECA)	2:10:00
Executive Director	Office	1:40:00
Project Coordinator	Field (EAMECA)	2:20:00
Country Programme Manager	Field (EAMECA)	1:00:00
Senior Advisor	Field (EAMECA)	01:45:00 (Skype)
Technical Advisor	Field (Asia)	1:45:00
Country Programme Manager	Field (Asia)	2:10:00
Regional Director (EAMECA and Asia)	Field	02:10:00 (group interview)
Development Cooperation Advisor	Field (Asia)	01:30:00 (Skype)

Appendix III: The interview skeleton

The interviews were conducted in Finnish, and below is the translation of the skeleton sent to the interviewees before the interviews.

INTRO

The purpose of this thesis is to study what kind of practices, structures and cultural aspects facilitate learning, knowledge transfer and smooth knowledge flows within an organization. The purpose of the interview on the other hand is to study these matters inside Fida and especially its development cooperation unit: how does knowledge move, in what ways and between whom? Does Fida have some best practices, and are some situations bottlenecks blocking the knowledge flows?

If it's ok for the interviewee the interview will be recorded, and the recording transcribed in order to analyze the results of the interview. The interview material will only be used for the study purposes, and it will not be used in such a way that the interviewee could be recognized.

BACKGROUND

In the beginning of the interview we will go through the background of the interviewee: how long have you been working at Fida in your current position / in other positions? How is your typical work day? What tools do you use and with whom do you work?

KNOWLEDGE FLOWS

Knowledge is often planned to be transferred e.g. via email announcements, reports, official instructions, regular meetings, databases and trainings. Unofficially knowledge flows in all interactions between people, but also in e.g. post-its glued at screens or learned habits to check things from the easiest spot instead of the official place. The purpose of this section is to find out what are the routes that knowledge is planned to flow through, and what are those ways that it actually flows through. We will discuss the following themes:

- The formal routes
    - What kind of reports, internal announcements or regular meetings are part of your work? Is it clear to you what kind of routes knowledge is planned to flow through? Are these routes efficient? What IT tools do you use for knowledge acquisition and transfer? In your opinion, is the structure of Fida clear and functioning?
- The informal routes
    - Is during e.g. lunch or coffee breaks transferred a lot of such work-related knowledge that couldn't be acquired otherwise? Does Fida have regular free meetings (e.g. Christmas parties) where knowledge flows unofficially? From where and from whom do you usually get the knowledge you need?
- Organizational learning
    - In your opinion, does Fida as an organization learn and develop continually? Does Fida have certain practices that try to ensure that learning happens? How do development ideas proceed within Fida? Do you often take part in different trainings?
- Organizational culture
    - In your opinion, does Fida's culture facilitate the free movement of knowledge? Have you noticed some cultural aspects that hinder knowledge transfer? How would you describe Fida's culture?